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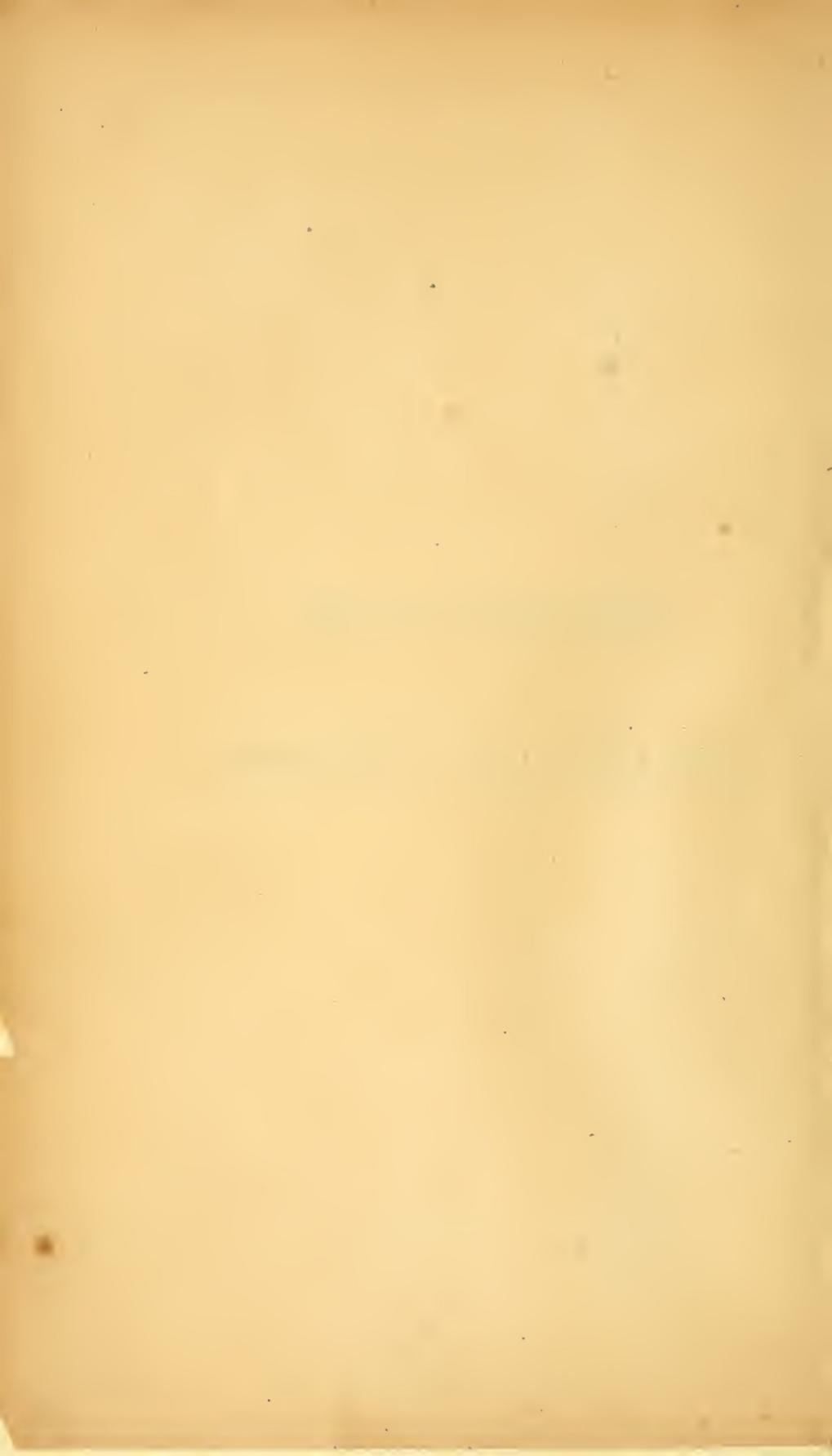
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ON
THE DECLINE OF LIFE
IN
HEALTH AND DISEASE.



ON
THE DECLINE OF LIFE
IN
HEALTH AND DISEASE,
BEING AN
ATTEMPT TO INVESTIGATE THE CAUSES OF
LONGEVITY;
AND THE BEST
MEANS OF ATTAINING A HEALTHFUL OLD AGE.

BY
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MDCCCLIII.

"Resistendum Læli et Scipio, senectuti est, ejusque vitia diligentia compensanda sunt. Pugnandum tanquam contra morbum sic contra senectutem. Habenda ratio valetudinis, utendum exercitationibus modicis: tantum cibi et potionis adhibendum, ut reficiantur vires, non opprimantur."

CICERO, 'de Senectute.'

"Is he wise who hopes to attain the end without the means, nay, by means which are quite contrary to it?"

TILLOTSON, 'On the Wisdom of being Religious,' Sermon 1.

TO

WILLIAM FERGUSSON, ESQ.,

PROFESSOR OF SURGERY AT KING'S COLLEGE;

TO

GEORGE F. WHIDBORNE, ESQ.,

AND TO

RICHARD D. HARRIS, ESQ.;

This Volume is Dedicated

AS A TESTIMONY OF

THE AUTHOR'S GRATITUDE FOR THEIR SKILFUL SERVICES

DURING A LONG AND SERIOUS ILLNESS,

AS A MARK OF

HIS RESPECT FOR THEIR TALENTS AND ACQUIREMENTS,

AND AS A TOKEN OF

HIS PERSONAL ESTEEM AND REGARD.

PREFACE.

THE celebrated Heberden remarked, that the life of a physician should be like that of a vestal virgin, which was divided into three periods ; in the first of which she learned her profession, in the second she practised it, and in the third she, also, taught it to others. I have certainly passed through the first and second of these periods : after several years employed in the study of my profession, I have spent thirty-five years in the practice of it, and, anxious to fulfil completely my vocation, I desire before I quit the stage to strike one blow for the good cause, to do something, however slight, to improve the sanatory condition of mankind, to alleviate pain, and oppose the influence of disease. I cannot hope, strictly speaking, "to teach my profession to others." The important task of instructing the rising generation of

students is most properly committed to a class of men, who, themselves trained to their duties, perform them in a most able and efficient manner, and any one even slightly acquainted with the medical profession thirty or forty years since, and who will compare its condition then with its present state, must bear testimony to the vast improvement which has taken place. Learning, ability, and skill, which were then the brilliant distinctions of a few individuals, are now generally diffused through all classes, and give the best evidence possible of the excellence of the present mode of education, and of the zeal and fitness of those who teach. Nor was it really the meaning of the great physician quoted, that they who had been many years in active practice should quit their useful labours to become the instructors of youth ; he meant that they should communicate to their brethren their opinions respecting diseases, ripened by long reflection, and tested by repeated experience ; for he did that, and did it well. In the days in which Heberden lived, few men thought deeply, and still fewer expressed their thoughts in writing ; many who then practised medicine, had been but very slightly educated, and were sadly ignorant,

and the advice of any man superior to those around him was received with avidity, and implicitly followed ; but the case is now widely different, and thank heaven it is so. All men have been well educated, all have had ample opportunities of acquiring the principles of their profession, and almost all practise it as a glorious and ennobling pursuit, which, whilst it contributes to their worldly welfare, enables them to pass their time in alleviating pain, combating disease, and often in restoring to the sorrowing and afflicted the blessings of health and happiness : but few men now venture to offer themselves as the instructors of their equals in years and experience, for few men are so misled as to think themselves superior to others, except when more ample opportunities have afforded unequalled means of observation and experiment. Hence it is from the class of physicians and surgeons who have the care of large hospitals that we must expect such works as will alter and improve the practice of medicine. It is only in those magnificent institutions, where diseases are congregated together, that different modes of treatment can be effectually compared ; that new theories, new practices, new reme-

dies, new operations, can be effectually tested by observation and experience; and it is one of the great duties of those who are honoured by having the control of such institutions intrusted to them, to examine and test every reasonable proposal that is made for the improvement of medicine and surgery, and to report thereon to the profession generally; and the press daily shows how completely and how ably this important duty is performed.

The position of the physician or surgeon, whose labours are devoted to private practice, is widely different: consulted daily by many persons, variously afflicted, and desirous of being cured as speedily as possible, it is for him to follow such line of practice, and to use such means as, fully sanctioned by the repeated experience of the profession, are acknowledged to be the best. He would ill perform his duty to his patients who should test in their persons the novel practices and remedies proposed by others, but which had not yet acquired the sanction of experience,—still less should he dare to put into practice any new ideas originating with himself. It is his duty to use as skilfully as he can all known appliances and means of

cure, but not to employ new ones, however well he may think of them, until repeated experience and observation have proved their fitness and value. It follows that he who practises honestly his profession in private life only, can very rarely have anything new to advance ; he has devoted his life to studying carefully all that has been proposed for the relief of disease, he has selected his means cautiously, and often employed them successfully, but he has probably never originated anything. He can confirm or confute the observations of others, and give a sound opinion as to their relative value ; but his life is passed in using the means prepared to his hand, not in seeking out new ones. His may be a less brilliant career than that of the inventive genius, but it is one of real utility. Here, as in all cases, the division of labour is important, and leads to good results ; and hence it is that often very able practical physicians and surgeons, to whose ability and skill all bear witness, are nowise distinguished as discoverers, and but little known as authors.

Such men, in estimating the value of the means at their command, employ a line of reasoning as strictly

inductive as the data will permit ; but in applying those means, they are so guided by circumstances, as to do in each particular case as much good as may be possible, without risking thus much in striving at complete success : *the physician should study his profession as a philosopher, but practise it as a philanthropist.*

The opinions I have stated above would have restrained me from appearing before the public as a writer on any subject except on the one I have chosen, for I have not vanity enough to imagine that I am better acquainted with the nature of disease, or the modes of cure, than my professional brethren ; nor have I anything to state to them of great novelty or value ; but it has seemed strange to me how little attention appears to be paid to the conduct of life with a view to avoid disease, to preserve sound health, and to lengthen out, in happiness and enjoyment, the period of our earthly career. It seems as if physicians, content with combating disease when it appears, concern themselves but little about the means of preventing its approach. It is surprising how little has been written on this subject, and yet how desirable it is

that it should be understood.¹ If good health and length of life be blessings we all justly desire to enjoy, he will surely perform a welcome service to his fellow-men, who shall point out how to attain the one and to preserve the other. They are benefactors to mankind who teach how to combat the attacks of disease, and to restore the injured organisation to a naturally sound condition; but it is better still to keep the body in so sound a state as to defy disease, and enable men to pass through life from year to year in healthful and vigorous activity. I dare not hope that I have succeeded in showing how to do this, but I have endeavoured to do something towards so great an end.

This book is, indeed, merely an essay towards a great and highly important object,—an essay which

¹ I do not mean that the subject of Hygiene has been wholly neglected. The works of Drs. J. Johnson, S. Smith, Hodgkin, Dunglisou, Tilt, Day, and of Messrs. Mayo and L. Beale, and others, contain much that is valuable; but, except the work of M. Revielle Pariset referred to in these pages, I do not know of any distinct Essay on the means of promoting Longevity, since Hufeland published about 65 years since ‘Die Kunst das menschlische leben zu verlängern,’—(The Art of prolonging Human Life,) which has been twice well translated into English.

may be enlarged and improved in future, which may, perhaps, call attention to the subject, and induce abler men to examine into it. I shall really rejoice if it should be so, and if this slight attempt should be the cause of calling the attention of the medical profession and the public to the investigation of the best means of preserving health and inducing longevity, I shall hope that I have, as far as in me lies, followed out the advice of the sage Heberden, and fulfilled the duties of my vocation.

There can be no doubt that health is the natural condition of man, and that we ought to pass through life in a state of vigour, enjoying every day of our existence. It is imperiously our duty to study the best means of promoting so happy a condition. If we thank the Great Creator of all for the life he has bestowed on us, we should endeavour to retain His gift in its fullest perfection. It would be well for mankind if the principles of Physiology, and the laws of Hygiene as deduced therefrom, formed a part of every course of education; for then men, being acquainted with the great causes of disease and the best means of preserving health, would so conduct themselves as to

secure the one and avoid the other ; and, if at any time the evil did appear, they would not become an easy prey to the unscrupulous effrontery of the ignorant charlatan, but, reflecting on the complicated structure and varied functions of the animal machine, they would well understand that he only who fully comprehends its actions in health can venture to guide and to restore them when their due course has been deranged by some baneful influence : *cupidity and effrontery are the parents of quackery; but it is ignorance or timidity that leads its dupes into the snare.*

It is well to study not only how to live healthily, but also how to live long. Let it not be said that we are unable to do this—that the duration of life is nowise in our power, and that we cannot lengthen it a single day: this is wholly untrue. There is, probably, no fixed limit to our existence ; and even if there were, how few attain it ! How few really die of old age ! Parr's death at 152 was premature— induced by a foolish change from the simple diet and active habits of a peasant to the luxurious ease and exciting foods and drinks of a courtly gentleman. His body was examined

by the great Harvey, who found all the organs in so sound a condition that, but for intemperance and inactivity, he would in all probability have lived many years longer. Cornaro, on the other hand, had led a free life up to 40 years of age, when his health was so reduced that he was assured that, if he continued the same courses, he could not live many months, but that, by strict attention to moderation in diet and by careful regimen, he might regain sound health. He followed this advice faithfully; and so well did it succeed with him, that, instead of a few months, he lived to the age of 104 in full enjoyment of all his faculties. Few persons may be able to follow out the rigid example of his life, nor would it often be desirable; but it is to all a strong lesson of the good effects of care and temperance, even when the body had become enfeebled by disease. I cannot avoid quoting a part of this amiable philosopher's account of himself:—"But some men object that a long life is no desirable thing, because that, after one is over 65 years old, all the time we live after is rather death than life. But these err greatly, as I will show by myself, recounting the delights and pleasures in this

age of 83 which now I take, and which are such that men generally account me happy. I am continually in health, and I am so nimble that I can easily get on horseback without the advantage of the ground, and sometimes I go up high stairs and hills on foot. Then I am ever cheerful, merry, and well contented—free from all troubles and troublesome thoughts, in whose place joy and peace have taken up their standing in my heart. I am not weary of life, which I pass with great delight. I confer often with worthy men excelling in wit, learning, behaviour, and other virtues. When I cannot have their company, I give myself to the reading of some learned book, and afterwards to writing, making it my aim in all things how I may help others to the fullest of my power.” He goes on to state that he enjoys travelling to seek out the beauties of nature and the choicest works of art:—“Neither is this my pleasure made less by the decaying dulness of my senses, which are all in their perfect vigour. To change my bed troubles me not—I sleep well and quietly anywhere, and my dreams are fair and pleasant.” And thus might it be with many—nay, I believe with most men, if in place of being

the slaves of their senses and passions, and the dupes of avarice and ignorance, they enjoyed life with moderation, submitted to the restraints of prudence, and allowed the counsels of learning and experience to guide their daily course.

22, MANCHESTER SQUARE ;
May 1st, 1853.

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INTRODUCTION.

FROM the earliest times, philosophers have considered the course of human life as divisible into three distinct periods,—growth, maturity, and decay, or childhood, manhood, and age;—and this division is, on the whole, sufficiently correct for all useful purposes. It would be difficult to fix any precise limits to each division, as it is manifest that the greatest possible variety occurs, and that descent, climate, education, and mode of life have each great influence in retarding the growth and decay of races and classes, as compared with other races and classes, or of individuals of any one race or class, as compared with other individuals of the same race or class; yet by a comparison of many individuals, general deductions might fairly be drawn for each class, or by comparing various classes and races, general conclusions for the whole human family might be fairly arrived at; and we might thus learn, 1st, what is the average dura-

tion of life; and, 2dly, how that period is on the average divided. But as such laws would be deduced from a comparison of *all* classes, they could not be strictly applicable to any *one*. It is better to limit our inquiries, if we desire that they should be practically useful. It is, therefore, my purpose in this essay to consider the life of man as presented to our observation in the age and country in which we live, and to regard variations of climate, race, &c. only so far as they may serve to elucidate our inquiries. Passing quickly over the period of growth, I propose to take the human frame when fully developed and matured, when at its greatest point of perfection, and to inquire,—

1st. What is the corporeal and mental condition of man when at a state of maturity, and what his physical and mental condition when age has come upon him? also to show how, when unaffected by disease or accident, he passes gradually from maturity to age, and sinks at length into the arms of death.

2d. To inquire what is the extent of longevity which such healthy individuals may hope to attain, and how they may best be made to enjoy life, even until its close.

3d. To inquire what are the diseases to which age is most usually liable, and by what means such diseases may be avoided or mitigated.

PART I.

ON THE DECLINE OF LIFE IN HEALTH.

CHAPTER I.

A SKETCH OF THE PROGRESS OF THE ORGANISATION OF MAN FROM BIRTH TO MATURITY.

It is impossible to imagine anything more helpless than a newly-born infant. If left disregarded, its existence would terminate in a few hours; and many months, nay many years, must elapse before it is capable of caring for itself. It is well that nature has made maternal affection the strongest of all human impulses, and has thrown such a charm around the helplessness of infancy, as to enlist for its protection and support the warm sympathy of all, especially of females. Destined to become most complete in organisation, endowed with marvellous mental capabilities and with a plasticity of constitution, which

enables him to adapt himself to all climates and to all circumstances—to command and to employ the powers of all other animals, and to bend all nature to his will; Man, at the period of birth, appears incapable of any action except receiving and digesting food. I say receiving food, for the child is for a long time unable to make any effort to procure it.¹ Its proper nutriment, the mother's milk or any substitute for it, must be placed in its mouth, and thus the stomach of the little being must be filled with the *pabulum vitae*, independently of any effort of its own. But this being duly done, the digestive organs actively avail themselves of it. The lacteal and other absorbent vessels greedily extract therefrom the nutritious portions to build up the future Lord of the Creation, and the refuse is quickly cast forth from the body to leave space for a further supply.

The organs of respiration and of circulation are equally active with those of digestion. The breathing is very rapid; the heart acts with greater frequency (perhaps with greater force, proportionally speaking,) than at any after period of life, carrying to every part of the body the vital fluid laden with the

¹ The mechanical action of suckling is instinctive. The infant grasps and sucks anything put into its mouth; and thus, when the nipple of the mother is placed there, it seizes on it, and extracts the milk.

matters requisite for its development and growth. Thus, then, from the very commencement of existence, the processes of organic life are fully performed. The ingestion and digestion of food, the extraction of its nutrient portions, their distribution and deposition throughout the body, and the removal therefrom of whatever is useless or effete.

But the powers of animal life appear as yet scarcely to exist. The little creature is unable to support itself; the movements of the limbs are involuntary and without design; nor is there the slightest manifestation of the existence of mind, the infantile cry being only an indication of pain or of hunger. Only by *slow degrees* do the various organs of the body assume their due consistency, the functions of animal life gradually appear, and the existence of the mental powers become evident. All the processes of early life seem to have but one object,—the perfection of the various organs, that is their complete development and growth up to the most mature condition. To understand this, let us take a slight review of the condition of the various organs of an infant. The food of the infant has been already prepared in the system of the parent, and does not require to be masticated. The absence of the teeth is therefore unimportant, and the fluidity of the nourishment is best

adapted to that rapidity of supply and digestion which is requisite to build up quickly the various textures. The organs of deglutition are perfect. The stomach, the intestines, the liver, spleen, pancreas, and the lacteal system of vessels, are fully developed and completely perform their duties, and thus the nutritious matters are duly collected and conveyed to the heart. All parts of that organ are complete; its functions are performed with a rapidity and vigour greater than in adult life, but which the wants of the infant system require. The pulsations vary from 120 to 130 in the minute;¹ the capillary vessels are numerous and distensible; the coats of the veins firm, and their valves strong.² Thus the formative fluid is rapidly carried to all parts, and the returning blood firmly sustained

¹ Dr. Carpenter gives the following table of the frequency of the pulse at different periods:—

Fœtus in utero	140 to 150
At birth	130 — 140
First year	115 — 130
Second year	100 — 115
Third year	90 — 100
Seventh year	85 — 90
Puberty	80 — 85
Manhood	70 — 80
Old age	50 — 65

² It has been fully demonstrated by Sir Clifton Wittringham, that the coats of the veins in young animals far exceed those of the arteries in density, and that consequently they are less subject to distension.

in its passage back to the heart. The lungs, the diaphragm, the parietes of the chest, are all complete in their development and action; the respiration is much more rapid than in after-life, being in relative proportion to the greater frequency of the heart's action. Less change is effected in the blood than in mature life, less carbonic acid is given off, and less oxygen received; for as the system has to be built up, not changed in its structure, the lacteal vessels are very active, whilst those absorbent vessels which have to remove effete portions from the whole body have but little duty to perform. It follows from this that but little caloric is given off, and that there is a deficiency of animal heat. Thus organic life is vigorous and active from the first, for much is to be done; the infant frame is very imperfectly developed, and incapable of performing any of the animal functions. The various organs of animal life must be gradually completed and consolidated. Increase of size and perfection of organization are required, and the organs of nutrition therefore are actively employed in receiving supplies and converting them into organized animal matter.

The Organs of Animal Life.—These have been well termed “organs of relation,” because they connect

the individual with the world around him. In infancy they are all imperfect. The great characteristic is a want of consistency. All these parts of the body are softer than in after-life; from year to year greater firmness is acquired, until, as will be after seen, consolidation becomes as much the characteristic quality of age as plasticity is of infancy. “*L’homme commence à l’état gelatinieux, et il finit à l’état osseux.*” (*Revielle Parise, Sur la Vieillesse.*)

The Bones.—In infancy the greater number of the bones are soft and incapable of supporting the body. There is a deficiency of earthy matter, and the animal portion contains more gelatine and less fibrin than in after-life. The extremities of the long bones, their epiphyses and apophyses, are separate from their shafts and are cartilaginous. Yet those bones which are essential to the perfection of the organic functions are now complete, the ribs are fully formed, and the rings of the vertebræ, forming the canal for the spinal marrow, are complete; but the bodies of the vertebræ are imperfect, and the spinous process remarkably so. The pelvis is not fully formed; the ossa innominata are each divided into three portions, and the internal bones of the cranium are incomplete and widely separated from each other. The muscular system is equally imperfect, pale in appearance, weak and flabby

in texture, incapable of much exertion, and attached to the cartilages or bones by tendinous extremities, which are soft and weak. We scarcely seem to contemplate the rudiments of those organs, which in future time may perform such marvellous feats of strength and agility.

The Voice.—The shrill cry of infancy differs not more from the full tones of manhood, than do the organs of voice in infancy from those of adult age. These parts are composed chiefly of muscles and cartilages, none of which are fully developed in early life; but as they gradually become so, the voice becomes changed, until at the period of puberty a large and sudden development occurs, and consequently at that period the voice, especially of the male, is greatly altered.

The Brain and Nervous System.—The brain in infancy is very soft, almost pultaceous, and large in proportion to the body, indeed it does not appear to get larger after the third year of life, but increases in density and weight up to the close of the seventh. The spinal marrow resembles the brain in condition in infancy, but is somewhat more dense and complete, as the difference of its duties would indicate, being chiefly the organ of sensation and locomotion, while the brain is chiefly the organ of the mind.

The Senses.—The organs of sensation being all imperfect in their development, the senses are necessarily imperfect also. The sexual organs being as yet undeveloped, their functions are entirely dormant.

Thus, then, it appears that at birth no functions are matured but those which contribute to development and growth; that no parts of the body are perfectly formed but those which are needful to the performance of these processes. All those parts of the body, by which man is connected with the world in which he lives, or with his fellow men; all those organs employed in thinking and acting, or in propagating his species, being as yet imperfect, the functions of such parts are in abeyance. In proportion as the body grows, the various parts become developed and perfect in structure, and are thus enabled to perform their several functions. The muscular system becomes firm, and the child can grasp and move; the structure of the larynx becomes complete, and the child can speak and sing; the organs of sense are perfected, and the child can see, hear, touch, taste, and smell; the brain becomes firmer, and the child manifests thought and will. At length the period of puberty arrives. The sexual organs are developed, and new sensations and impulses arise, which change and modify all that concerns the indi-

vidual. But the frame is not complete, nutrition and growth go on, and the various organs acquire size, firmness, strength, and fitness, day by day, and year by year, until they arrive at the full extent of their development, and the individual is matured.

CHAPTER II.

ON MATURITY.

OF the three stages of human existence—the first appears to be by far the most regular and defined in its course. From the period of birth to that of manhood, the processes by which the body acquires increase in size and strength succeed each other, notwithstanding the influences of class, education, and habit, with so little variation—that, as far as an enlarged and philosophical consideration of the subject demands, we may regard infancy as terminating shortly after the second year, childhood as enduring until about the fifteenth year, and adolescence as lasting until the twenty-first or the twenty-fifth year. At that age all the structures of the body and the powers of the mind are completely formed—perception, imagination, memory, and judgment—have acquired full vigour; although the acuteness of these faculties, like the muscular form of the limbs and trunk, and the delicacy of the organs of sense, will be greatly increased by employment and experience. There is some difference between the sexes; the development

of the female is the more rapid, and the age of complete womanhood precedes that of complete manhood by three or four years. It must not, however, be imagined that the full development of the sexual organs, and the consequent power of reproducing her species, is any evidence of the attainment of complete womanhood. A girl of sixteen may generally bear children, and many boys of the same age may often as certainly beget them, but in both cases such actions are premature to the designs of nature, and if often repeated would assuredly retard or prevent perfect development, and induce an early accession of decay. I regard, then, the mature man or woman, not as one in whom the body and mind have attained their greatest development and power, but as one in whom all the organs and faculties of the body and mind have arrived at that degree of completeness and perfection, which admits of, and even demands, regular exertion, which enables all the functions of body and mind to be efficiently and regularly performed; so that by daily use they may be increased in power and capacity for exertion, the processes of organic life steadily supporting the whole, and thus producing that most admirable of the great Creator's works—a rational and healthy man.¹

¹ According to M. Quetelet, the male attains the maximum weight

The frame should have acquired the greatest degree of height that the individual is capable of attaining. This will vary greatly; but it must not be imagined that very great height is a proof of superior physical development. It is but rarely that it is accompanied by corresponding strength or symmetry, and a regular proportion of parts to each other is more often to be found in very short than in very tall persons. We may take the height of five feet ten inches as a fair medium standard of manly development—

“The middle size
For feats of strength or exercise
Framed in proportion fair.”

It too often happens that what is gained above this in height, is lost in due proportion of parts; that the extremities are too long, the chest is not duly capacious, the long and perhaps weak spinal column does not give sufficient support to the head, and a bend forwards, elevated shoulders, and an ungainly deportment, are not uncommonly induced. It is true that we sometimes meet with persons of great height, who are nevertheless most regularly proportioned, in whom no one part appears to be sacrificed to another, but

at about 40, and begins to lose it sensibly at about 60. The maximum in the female is at 50. In the male the growth is completed at 25, in the female earlier. (*Annales d'Hygiène.*)

the whole form seems to have simultaneously attained great beauty and strength, and to have also grown to the height of six and a half or seven feet. Such instances may be regarded with admiration and wonder; they are fine examples of nature's powers of development, but they are irregular; they are not (at least in this age and country) fair samples of humanity.

It is in the due proportion of parts to each other that we are to seek for that development which will most conduce to health and longevity; indeed, a size considerably below the usual standard may be considered as perfectly normal and healthful, if due proportion exist. Persons of five feet four or six inches high are often fine specimens of manly symmetry; and it not unfrequently occurs that an increased development in breadth, although it takes from the beauty of the individual, gives great increase of muscular power to the limbs and trunk, and of capacity to the chest, and thus forms a very strong and healthful individual. Thus, too, amongst domestic animals, the small, compactly made Alderney cow is celebrated as a good milker. Horse dealers will praise a *cob* as a large horse in a small compass; and the courage, strength, and endurance of a well-bred and well-framed pony is really surprising. In animals, as the

ox, sheep, and pig, bred merely for food, enlarged development is of course desirable; but even in these it is not increase of the height but increase of the trunk, that is, of flesh, that is sought for.

The external form of the body being of the perfect or normal character described, or nearly approaching to it, it is requisite also that we consider the internal organs in a corresponding state of healthful development, and performing all their functions freely and regularly. First, as to the organs of supply: after a few hours' abstinence the stomach should give notice of the wants of the general economy, by a craving for food, which, being taken in due quantity, and duly prepared by mastication, should in a short time be converted into chyme, the nutritive portion be extracted by the lacteal vessels, and the refuse be carried onward through the intestinal canal and expelled from the body. Meantime, the contents of the lacteal vessels should be conveyed into the blood, and be carried by that fluid to every part of the body, to be subjected to the wonderful process of the chemistry of life. The sanguiferous system, which thus receives its supplies from the nutritive, must act in perfect correspondence with it. The heart is a double organ; the right side may be called the chamber of reception, the left side the chamber of distribution, whilst between

these two there stands the pulmonary circulation, or as it might well be called, the circulation of purification. Let us trace the course of the blood; the right auricle receives from the whole body, the dark venous blood, laden with the matters collected in its course by the capillary branches of the veins, or poured into the larger trunks by the lacteal and lymphatic vessels. In its passage through the lungs the blood is supposed to cast off a large quantity of carbonic acid and to absorb oxygen, and being thus purified it becomes the red arterial blood poured into the left side of the heart. This red blood is then propelled to every part of the body, to form and to sustain it. It gives out everywhere new matter, nearly similar in form, appearance and properties, to those effete portions which the absorbents are continually removing, so that the body, although perpetually changing, is but little altered in structure and appearance; or it deposits new matter wherever it may be required, to increase the size and strength, or to repair the effects of injuries or disease. In the kidneys, the skin, the testicles, and in all glandular structures, it yields up all that the functions of those parts demand, and it gives out such matters as it is needful to cast forth from the body. Thus then Digestion, Respiration, Circulation, and

Secretion, are the means by which man lives and grows.

It is the relative action of the organs of nutrition and absorption, their due balance, or the preponderating activity of one over the other, which must give rise to the increase or diminution of the size of the body, or cause it to remain at the same point of development.

In infancy, the nutritive functions are most active; more is deposited than is removed, and hence the rapid growth of the whole; the human frame has to be built up by the gradual accession of materials drawn by the lacteal vessels from without, and moulded and arranged by the capillary arteries within. The lymphatics, although not called upon to perform so much labour as in after-life, have yet to carry away by means of the skin, the kidneys, &c., matters effete or useless to the system. When, however, all the organs are fully developed, and the body has attained maturity, a different relation of these actions occurs. The blood-vessels are only called on to replace what the absorbents remove, and for a period the normal condition of the frame may be regarded as one approaching to a perfect equilibrium. During this state of maturity the body should neither increase nor decrease in size, form, or vigour, except inasmuch

as the continued exercise of some parts, or the disuse of others, may occasion a greater or less degree of development. We shall afterwards see that as age creeps on, the balance is again disturbed, and the absorbents carry off more than the arteries can supply ; the body consequently decreases in size, until the handsome, well-rounded form of manhood

“ Shrinks into the lean and slippered Pantaloon.”

There is a regular chain in nature’s works, demonstrating the uniformity, simplicity, and beauty of her designs. Inanimate matter is formed, and increases in size, in obedience to the immutable laws of mechanics and chemistry ; and these laws equally affect all living things, but are modified in their action by the controlling power of vitality. The one great peculiarity of living bodies is, that although, even as inanimate bodies do, they grow by an aggregation of similar particles to each other, yet these particles are not, as it were, accidentally placed in *juxta-position* and united to each other by cohesion, but are drawn from sources wholly different from themselves, and by the vital powers are changed and moulded into the required structures. Thus the vegetable kingdom draws its support entirely from earth, water, and air ; and, by the vital power converts these into the

succulent and delicious herbs and fruits of our gardens, and the magnificent and unbrageous trees of our forests. To effect these changes in matter, vegetables are endowed with the systems I have been describing as those of organic life. They live and grow by similar means to man, by nutrition, circulation, and respiration ; but animals are raised a step higher in the chain of creation ; they are capable of moving from place to place, and of receiving and of conveying impressions or ideas, and for these purposes they are endowed with two additional systems of organs, viz., the muscular system, or the organs of locomotion ; and the nervous system, or the organs of sensation and of the mind.

The locomotive organs connect man with the external world, enable him to move from place to place, to seize on all substances around him, and so to use or mould them as to supply his wants or wishes. Some of the movements of the animal economy are performed involuntarily and unconsciously ; but by far the greater number are under the direct control of the individual, and occur only agreeably to the dictates of the will.

The will of the individual is conveyed to the organs of locomotion from the brain, the seat of the mind, by means of the nervous trunks, that wonderful

system of fibres, which, as Dr. Marshall Hall has so ably taught us, is truly of a double character, carrying to the centre, within, every variety of sensation from without, and transmitting to every muscle, by a reflex action, the consequence of any stimulus so applied to the circumference ; or, without such stimulus, transmitting to the muscles the dictates of the will. All muscular movements then, except those on which the processes of organic life depend—as those of the heart, the chest, the intestines, the uterus, &c.—are either the consequences of the application of some stimulus to the extremities of the afferent nerves, or are actions dictated by the mind, whose will is conveyed by the nerves to such muscles as it desires to set in action.

The brain must be regarded as the organ of the mind, just as much as the legs are the organs of locomotion, or the hands the organs of prehension. It is the medium through which that spiritual essence we call mind receives impressions, and the means by which it directs the actions of the organs of the body : thus displaying its will, and communicating with the world around. A healthy state of the brain, then, is as essential to the action of the mind, as a sound state of the leg to motion, or of the eye to vision.

The manner in which the mind is bound up with the body defies all investigation. Although it is impossible to regard the mental powers as qualities of matter, yet it is almost as difficult to contemplate them apart from that material organ which gives evidence of their existence, and the means of their activity. Sight is no part of the eye, hearing of the ear, or reason of the brain; yet without these organs neither sight, hearing, nor reason, can be made manifest. An injury done to the retina or to the auditory nerve, destroys at once vision or hearing; yet if the mind be in a sound state, the accident cannot have affected those faculties of the mind. The mind's eye, the mind's ear, so to speak, are still perfect, the injury has merely destroyed the means by which the mind (as far as those faculties are concerned,) is linked with the external world. All the impressions received by the mind from without, are received through the organs of sensation. All external manifestations of the mind are made by the organs of speech or action. What the mind is, or how it is connected with organisation, we shall probably never know; neither is it important to our present purpose, nor indeed to the study of its action. It is clear that only through the bodily organs can it make itself manifest. It is true that sight is not in

the eye, nor hearing in the ear, nor judgment in the cerebrum; yet, independently of those organs, these faculties are absolutely useless. I believe it would much facilitate our inquiries, if we were to regard the human mind as at all times *an immaterial entity, superadded to organisation, but not in any way dependent on it, nor necessarily connected with it.* We may, then, regard the mind as *equally perfect during the whole period of life;* the same at the first as at the last day of existence; varying at various times not in its own innate powers, but in the stores of knowledge it may have acquired by communication with the world around it, and in the organised means by which it can manifest its operations.

When we speak, then, of the growth of the mind, we do not mean the growth of the actual mental powers, but the augmentation of the stores of knowledge which are gradually acquired by the mind, and which are essential to its daily action. Now these stores of knowledge are gained only through the organs of sensation, and it is therefore evident that the perfection of these organs is necessary for supplying the mind with wholesome food; to promote, not the growth of its abstract power, (which, being incorporeal, may be always equal,) but the accumulation of those clear impressions from with-

out, which enable it so to exert itself as to act in that manner which we call *wisely*.¹ The organs of infancy cannot convey correct impressions to the mind, nor is the brain perhaps sufficiently consolidated to receive them properly ; it is necessary that a certain maturity of organization should exist, in order that the impression conveyed to the mind be clear and definite, that many various and repeated impressions should have been made before it can have gained an adequate store of knowledge, an adequate mass of materials whereon to exert its powers. Perception, memory, imagination, and judgment, are usually regarded as the four great powers of the mind.² Of

¹ If this view be correct, there are no such things as mental diseases. The mind may vary in its original power; but the changes which seem to occur in it, are really the results of changes in that organization through which it receives its impressions, or by which it manifests its existence. Recoveries from the various states called diseases of mind appear to me strongly to confirm this view of the subject; for it is difficult to imagine how an incorporeal essence can become the subject of disease, or can recover; but easy to understand that if its material agents are injured its actions must be suspended or changed, and may be again restored in the same way; as, if the hand be injured by a bruise or wound, it will be unable to grasp anything, notwithstanding that the mind might *will* that it should do so; and the nervous fibres bear to the disabled muscles the mandates of the *will*, but if the bruise or wound be healed the muscles of the hand will then become again obedient to the dictates of the mind.

² It is, perhaps, only the fourth which we can truly regard as the reasoning faculty, and the source of the *will*.

these, perception is the great supplying power on which the others depend. The eye perceives all that passes around it; and by the use of letters it is enabled to peruse the records of past events, and thus, as it were, to see all that *has ever* been, and all that *now is*, throughout the world. Nay, more, to commune with the bygone races of mankind, and learn all that they saw, heard, read, or thought. In the same way the ear, the touch, the taste, the smell, minister to the mental storhouse, carrying valuable impressions of all around. Memory is but the power of calling up, from the well-arranged stores of knowledge, past impressions and the effects produced by them.

Imagination is but the faculty of comparing old impressions and arranging them in new forms, or under new circumstances. It is erroneous to regard imagination as a creative power. We cannot imagine anything but as resembling something we know. The ancients clothed their deities with human powers and faculties in an exaggerated degree, or they united, as is shown in the sculptures from Nineveh, the attributes and powers of various kinds of beings. Whenever we attempt to go beyond this, we deceive ourselves by mere words; thus, the terms space, eternity, are not and never can be definite ideas, but

are terms used to conceal our ignorance, or to acknowledge that our powers are finite. The very essence of our ideas of distance or time is a fixed measurement, be it of an inch or a league, a minute or a century, they are all implied by the words *from, to*. We are unable to form any idea of distance or time, with beginning or end ; we have no such image.

What is called imagination or invention, is not the creating anything essentially new, but arranging in a new manner things essentially old. Judgment, the great faculty of the mind, is the reasoning power ; the three others are its servitors, and as they have performed their duties well or ill, so are the stores at the disposal of the judgment of more or less value. It arranges the varied stores which perception is constantly bringing to it, avails itself of the new combination of those stores which imagination is constantly conjuring up, and benefiting by the experience which memory presents of the records of past impressions and imaginings ; it compares, deduces, decides, and governs the actions of men, more or less wisely, as this power of judgment is more or less perfect, and as the stores accumulated for its use are greater or less.

It must be evident, then, that without entering into any anatomical examination of the state of the brain in

early life, or any physiological investigation as to the condition of the mind in youth, it cannot so early have acquired its full store of knowledge, nor its complete power of judgment and manifestation ; and that we thus seem to trace from year to year the growth of the mental with the increase of the corporeal powers. It follows also that it is not so in the downward course, that the mind will increase in power whilst the body remains stationary at its matured development, and that the decline of the one does not imply the decay of the other ; but that often whilst the body is losing power daily, the perception is still accumulating knowledge, the judgment is comparing and resolving with increased vigour, and the light of reason shines sometimes most brightly towards the termination of our earthly career ; shewing the great superiority of the mind over its corporeal tenement, of which it never was an essential part, but which only served as the means of its activity and communication with the world around it.

When we thus contemplate a man in the full maturity of growth and power, there does not seem to be any reason why this glorious condition of humanity should not endure for ever. The food received and digested supports and renovates the animal powers. The regularity of the circulation and the due supply

of nervous energy keep these organs of nutrition in vigorous activity. The refuse is duly cast off by the organ of excretion. Life seems to be a perpetual round, a series of circles acting harmoniously together, each performing its own course, yet each connected with and dependent on the others, and all uniting in one homogeneous revolution, even as Astronomy teaches us that the earth we inhabit, whilst moving on its own prescribed orbit, is but one of many worlds moving in similar orbits, all connected with each other, to form one solar system ; and that system, perhaps, but a small fraction of the great universal whole.

Why may not the circles of the human microcosm go on in a round as the planetary bodies do, or have those orbs, like our frail tenements, a determined period of existence ? Are we now contemplating the universe in its period of maturity ? Had it ever a period of gradual development, and will there ever be a period of gradual decay ? a time when not only the bodies of men, but the material framework of the universe shall be gone, and the spirit of the great God, the Soul of the Universe, shall remain ; and with it those glorious emanations, the souls of men, which, innately conscious of their immortality, defy decay.

"The stars shall fade away, the sun himself
Grow dim with age, and nature sink in years :
But thou shalt flourish in immortal youth
Unhurt amidst the war of elements,
The wreck of matter and the crush of worlds."

Although these questions form themselves in the mind, and are highly interesting, we must leave the consideration of them to cosmogenists, geologists, and perhaps to theologians. Our purpose now is with the matured condition of man, and there can be no doubt that the law of his nature is a law of progression ; that his decay must as surely follow his maturity, as his youth precedes it : the real question then is, has this state of maturity any definite period of duration ? It cannot be made to endure altogether ; but how long can it be made to endure ? does the period depend on ourselves, or is it altogether beyond our control ? I do not hesitate to assert that the duration of the period of maturity is greatly within our control ; and that, although the termination of the journey of human life is absolute and certain, yet that not only the length of that journey, but the manner of its division into various stages, and the degree of ease and pleasure with which we may travel, depend essentially on ourselves.

It might be imagined that, in woman, nature has clearly marked out the period of maturity, as the period

during which she is capable of propagating her species, and that from the commencement to the cessation of menstruation is the period of complete womanhood; but, however satisfactory this may appear at first sight, I believe it may more correctly be regarded only as the period during which one of the greatest duties of the female economy can be performed. We cannot surely consider young girls of from 14 to 16 years of age as perfect women, although they might undoubtedly bear children and nourish them. Their physical power is not fully developed, their minds are not fully matured, and nature requires five or six years longer to complete her work, and until then the work of procreation should not be begun. As little would it be just to regard a woman at 45 or 50 as aged, merely because the catamenia may have ceased to appear. If she be vigorous in body and of clear intellect, if the external form bears no mark of wasting or decay, if all the functions of organic and animal life, with that one exception, be well performed, she has ceased to be fitted to perform one of the highest duties of her vocation on earth, but is not therefore entered on the last division of her life.

If we were to be guided by such a rule, how could we estimate the period of maturity in man? The commencement and termination of the procreative power

in him is most uncertain, and has often undoubtedly been exerted in mere boyhood, and at a period of advanced age. It must not be forgotten that the laws of nature are universal, yet a reference to comparative physiology will not serve us. Female animals undoubtedly bear their young during the *maturest* periods of their lives ; but this period is by no means a fixed one, and depends on training and nourishment.

Woman is the only catamenial female, and therefore the only one in whom the period of productiveness is fixed ; but it must not be forgotten that woman, too, is the only female whose passions are subject to moral restraint ; who often passes through life without any connection with the male sex ; who brings forth an offspring so utterly helpless as to rely wholly on the parent during a long period of its existence, and whose period of lactation generally exceeds that of gestation. A healthy woman should be capable for 30 years, not only of producing a healthy child after nine months of gestation, but of affording to that infant ample nourishment during the first 10 or 12 months of its existence. Now, the catamenia do not usually flow either during gestation or lactation. Are they not then a wonderfully wise provision of nature, by which during 30 years of female life women may be preserved

in perfect health, although not impregnated, and yet be at all times fitted to become mothers and nurses.¹ Did women lose a periodic discharge of blood at all times, gestation and lactation would be imperfectly performed, or the constitution of the parent would suffer most seriously by these processes. Did the unimpregnated female not menstruate, a dangerous plethoric condition of the body, and perhaps an erotic and no less dangerous condition of the mind would be the consequence. Although it is true, therefore, that the catamenia appear during the maturity of womanhood, we should not regard them as a proof of that maturity or as a measure of its duration; but as a means by which the organs of reproduction may be kept in a condition fit for active employment, and yet which serves to sustain the balance of the constitution should they lie fallow.

If then we have no sure guide to the duration of maturity in women, still less have we any in men. In both cases the commencement is clear, but the duration uncertain. In men we may fix the commencement at from 22 to 25 years of age. In woman at from 19

¹ Women sometimes menstruate during suckling, but when this happens it is not generally until two or three months after delivery. The milk is often vitiated in these cases, and damages the alimentary canal of the infant. (Elliotson's Human Physiology, p. 770.)

to 23.¹ At those periods they have travelled upward by the steps of infancy and adolescence, and have reached the Table Land of middle life, a vigorous, healthful, and, it should be, happy period of existence, the duration of which is entirely unfixed, but depends mainly on two things, viz.:

1. The original constitutional stamina of the individual.
2. The manner in which he shall employ those great gifts, mental and corporeal, with which it has pleased God to endow him.

There are many able writers who deny that there

¹ Dr Elliotson (*Human Physiology*,) fixes full maturity at a much later period. "At about 30 in the female, and 36 in the male, every part has generally obtained perfection of structure, and consequently of function," (p. 1019). "The generative power increases with all the rest. Men and brutes in their prime are more fruitful than in the early periods of puberty, and their offspring larger and stronger. At the first birth the full time is frequently not accomplished, and the breasts supply less and inferior milk—even the first eggs of birds are small," (p. 1020). There can be no doubt that the latter of these paragraphs is partially true; but does it follow that men are not in their prime until 36, or women until 30? If so, with a due regard to the healthfulness and vigour of their offspring, they should not generate before those periods, and hence they may be regarded as having been at least fifteen years endowed with powers which it would be unwise to use. I cannot readily admit a conclusion so evidently against the dictates of nature, and I think it would be found on due investigation, that the most healthful and vigorous of the human race have generally been born before their parents had attained the very mature ages of 36 and 30 years.

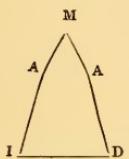
occurs in the course of human life such a lengthened period of maturity as I have endeavoured to describe. Thus Dr. Symonds¹ defines maturity as, "in strictness, that period of human existence in which the processes of growth and decline are passing into each other by such degrees as to be imperceptible." He thus reduces maturity from an enduring condition to a mere point of time. "There is, in all probability," he says, "no period when the system is absolutely stationary—it must be either advancing to, or receding from, the state of perfection." Such thinkers appear to regard human life as a hill decidedly conical, which we ascend by regular steps until we attain the summit, and then at once, without pause or rest, commence the downward course on the other side. I venture to take a more cheering view of our condition, and one which, I think, is better borne out by anatomical and philosophical observations. Anatomically speaking, I may well inquire, is it possible to point out that condition of all the organs of the body which constitutes its maturity, and then to show that in a day, a week, a month, or a year, later or earlier, a different condition of the organs necessarily exists? Yet this should be possible, before it could be safely asserted that maturity is a point of existence only. It is undoubtedly true that

¹ Cyclopædia of Anatomy, p. 76, vol. i.

the phases of human life should pass so gradually from one into the other, that the manner of those changes should not be perceptible, even as in those beautiful optical exhibitions called Dissolving Views, one picture seems to melt slowly into the other, until the entire picture is changed; but either picture may endure in all its entirety for any length of time, and yet the manner of the change be slow and imperceptible; even so youth may pass into manhood, and manhood into age, by slow and imperceptible degrees, but it surely does not follow that there must necessarily be no pause in the career. It is certainly more agreeable, and I think quite as philosophical, to presume that these powers of body and faculties of mind, which it has taken so many years to perfect, may for a time endure unchanged, and be for a time capable of vigorous and continuous exertion. Let daily observation answer the question. When we speak of an individual being at his *prime*, do we mean a single point, a mere day of his existence? No, surely not; we mean the entire period, from the moment when his powers have become fully matured, until the period when they shall begin to decay, and we demand from such individual the full results of that complete maturity; not the unripe fruit of an ascending adolescence, nor the weaker production of declining powers. If the opinions I have contended against are

just, it is absurd to speak of life as divisible into three periods,—youth, manhood, and age, or growth, maturity, and decay; for manhood and maturity do not really exist at all,—they are not periods of existence, but mere points dividing the periods of youth and age, of growth and decay, from each other.

These two views may be well represented by diagrams. Thus, Dr. Symonds regards human life



as a cone, infancy and adolescence being on the one side, and age and decrepitude on the other, the summit of the cone being the most perfect point of life; but this being truly a point only, enduring no perceptible period of time, the body no sooner attains its greatest perfection, than it commences to lose something of its power, and by slow degrees to decline. In the view I venture to take of the course of life the diagram

would be of another form.

 A diagram showing a curve that rises from the left, levels off, and then slopes downward on the right. The peak of the curve is labeled 'M'. On the left side, near the base, is a point labeled 'Y'. On the right side, near the base, is a point labeled 'A'.

The ascending side of the mountain is much the same. I believe this side to curve gradually as it rises, so that youth and manhood pass into each other by gradual and almost imperceptible degrees. Having attained the Table Land, *maturity*, I regard this as a horizontal plane, varying in size, but terminating by a sloping downward

curve, much more extended than the ascending side ; and, although it may end at length in a precipitous descent, yet the gradations of decline are at first almost imperceptible.

CHAPTER III.

ON THE DECLINE OF LIFE.

THE glorious and happy condition of maturity having endured some time, the mental and corporeal powers having remained also some time in a condition of vigorous activity, a change more or less gradual occurs, which marks the commencement of the downward course : the decline of life begins, and is shown by most unmistakeable signs, signs affecting the corporeal frame only, for the powers of the mind remain often for many years unchanged, thus asserting their higher origin and independence, and enduring as long as the bodily organs can give manifestation of their existence and power. When an individual arrives at about 50 years of age, there is usually an increase of the whole bulk of the body, fat is deposited throughout, impeding the play of the muscles, and rendering the individual less active. The abdomen especially increases in size, becomes round and often prominent ; the “fair round belly with good capon lined.”

This plumpness is confined, however, to the trunk,

the face loses its fulness, the eyelids especially become loose, and the skin at the corners of the eyes becomes puckered and marked by lines, assuming an appearance usually denominated crow's feet; the forehead loses its smoothness, and is crossed by furrows; the corners of the mouth, too, become marked by many lines, and the cheeks are flatter than they were wont to be. The muscular development is diminished; there is a manifest falling off in the calf of the leg, in the buttocks, and other large and prominent muscles employed in active exertion or locomotion; the skin of the extremities, especially of the hands, becomes looser and more dry and harsh than heretofore.

The hair often gives the earliest indication of decline; it does not become gray at once, but changes gradually, or often straggling gray hairs may be early detected here and there amongst their darker companions; they usually appear first about the temples,¹ or in the whiskers, and gradually increase in number; the whole head soon becomes like Hamlet's father's beard, "sable silvered;" gradually the white hair predominates, those of the darker colour become less and less numerous, until the individual becomes a perfect graybeard. Were this change in the colour of the hair regular, or even nearly so, it might be

¹ Hence so called from Tempus.

taken as a valuable indication of the approach of age; but, although old people are generally gray, they are by no means universally so. A lady lately died of apoplexy at the age of 80, whose long hair was completely black, and several of whose family seem equally to enjoy immunity from this mark of age. I was, however, informed subsequently, that in the case of this lady, a very few hairs of perfect whiteness would occasionally appear, but which she had caused to be carefully plucked out, as disgracing the raven beauty of her head. Solitary white hairs are most probably the result of some disease of the bulb. They often break short off or fall out, and yield to the slightest force applied to them. On the other hand, in many individuals the hair becomes absolutely gray before 30, and long before the slightest decline of any of the corporeal powers can be suspected; so that, although gray hairs usually accompany old age, they cannot well be taken as necessary to that period, nor is their appearance a certain prestige of its approach.

I must not quit the subject of hair without mentioning, that as age comes on it loses its gloss, crispness, and curl, and becomes thinner, more straight and straggling, requiring cutting less frequently, nay, often falls off; yet baldness not unfrequently occurs in early manhood, and is therefore no sign of age, nor an in-

variable accompaniment of it. In women the changes are more marked. Sooner or later, after the cessation of the catamenia, the external form begins to lose something of its luxurious softness, and all the indications of age, similar to those which occur in men take place; indeed, the whole system appears to approach the masculine character. The voice becomes more harsh and gruff; hair sometimes grows on the upper lip. (See Dr. R. Lee's *Clinical Reports of Ovarian and Uterine Diseases*, p. 2.) Burlieu says that it often appears on the chin also, (*De Fœmines ex suppressione mensium barbatis; Altorf*, 1664.) The muscular power is sometimes greater than before, and there is often an increase of energy and decision. Dr. Elliotson states that similar changes often occur in the females of brutes. "Birds, after ceasing to lay eggs, often lose the feathers peculiar to their sex, and acquire the characteristic of the male, as well as spurs, and, according to the remark of Aristotle, combs and wattles. Mares will acquire the mane of the horse; female giraffes the coats of the male; the doe will acquire the horns of the stag and roebuck." (*Human Physiology*, 1821.) From the termination of the period of maturity to senility, those changes go on more or less rapidly, which sometimes convert the active and healthful individual into the

decrepit old man—a second childhood, almost as helpless as the first—a sad picture of the decay of nature, and the loss of those powers and faculties which so lately commanded respect and admiration.

The great characteristic of all the changes which gradually occur from early to extreme old age, is *consolidation*, a diminished plasticity and mobility of parts, increased firmness of structure, and diminished bulk : interstitial fat is then everywhere absorbed ; the muscles become stringy and fibrous, and at their terminations ligamentous ; cartilages become bony ; bones lose their internal cancellous structure ; those of the cranium their diploe, and become merely solid masses, whilst the blood-vessels are diminished or obliterated, and hence they become fragile. The coats of the arteries become harder, and lose their tonicity ; many of the smaller trunks are obliterated, whilst, however, the veins have become larger and more dilateable than they were in early life ; perspiration is nearly at an end, for the skin has become harsh and dry, wrinkled, and discolored ; and even, as in the vegetable world, plants as they grow older become more and more woody, and the sap traverses only the larger vessels, so, too, in the old man, the circulation is carried on only by the larger trunks, and hence the whole body becomes thinner, firmer, more harsh, more dry, and loses strength

and mobility, and the power of repairing injured, or regenerating lost parts. The muscular system has become so weak as to be almost useless. The once powerful man, now unable to stand erect, stoops ; the shoulders are raised, and the head falls forward. In walking, the spine is much curved ; the aid of a strong stick or an able arm is required to keep the body in equilibrium ; the step is tottering and uncertain ; the spine is curved even when sitting, and the head hangs forward ; the hands are unable to grasp any object firmly, they tremble in a palsied manner if the attempt be made, and the command over the movements of particular fingers is very uncertain.

The voice is generally changed, the strength and fulness of tone is gone ; if it be loud, it is shrill, but more commonly it is weak as well as shrill. The voice of women, which, often during the later half of maturity had become gruff and sonorous as those of man, now falls equally into the “treble-pipe” of age.

The external senses become less delicate, or are nearly or altogether lost. The sight is perhaps the first that gives warning of the course of time ; even yet, whilst the other powers appear to be in full vigour, at a period varying from forty to sixty years of age, the organs of vision begin to change ; persons, in reading, hold books further from them ; small objects are

with difficulty distinguished, or a stronger light is necessary to make them distinct ; spectacles (that is, magnifying glasses of low power,) are required ; the objects must be presented to the eye under a different angle, for the eye is somewhat flatter than heretofore, and the retina has lost something of its pristine sensibility. All this occurs in various degrees, not only according to the constitution of the individual, but also according to the way the eye has been habitually employed. The lens becomes harder and not unfrequently loses its transparency, constituting cataract ; and round the cornea a peculiar opaque line is often found, limiting the extent of its transparency, which is known by the appropriate name of arcus senilis.

That the hearing becomes less acute in age is certain, but it may be doubted whether this arises from diminished sensibility in the auditory nerves, or from diminished flexibility and moisture in the auditory apparatus. It is certain that the external ear becomes less flexible ; that it, like all the integuments of the body, is harsher and drier ; that the meatus is more frequently filled with hardened wax, and it is affirmed by some authors, that the liquor Cottunii in the labyrinth is not unfrequently absorbed. (*Dict. de Med.*, vol. i.)—The same, or nearly the same, may be said of smell and of touch. The dry and wrinkled state of

the skin renders delicacy of touch impossible ; and the sense of taste, like that of smell, loses much of its discrimination, but retains its susceptibility to the force of impressions. ‘Delicacy of flavour, or of odours is lost on the aged ; but strong smells are detected and strong viands are relished up to the latest period.

Thus, then, as all the organs[“] of those faculties which connect the mind of man with the world around him become changed, as he cannot receive impressions from without through the channel of the senses as completely as he used to do, nor can move, speak, and act as perfectly as heretofore, it follows that the mind must appear to partake of the corporeal decay. It matters not that this “spark of heavenly flame” may be actually the same as it has ever been, the same in age as in youth or maturity, the links connecting it with all around are weakened or destroyed, and the mind retreats within itself in calm and peaceful contemplation ; yet I fully believe that it exists as heretofore, when the body was young and vigorous, unchanged, unchangeable, the same in youth, in manhood, and in age. In early life, acquiring knowledge from all sources, and arranging its stores ; in middle life, vigorously employing them for good or ill, and ceasing to act thus in age, only because its means of communication with the external world have become

imperfect ; yet if by any effort this communication be again fully established, how wonderful often the result appears. If an old man's attention be roused to any important object,—if, by patient exertion, the desired impressions are fully conveyed to the mind, how often are we astonished by the clearness of comprehension, and the accuracy and power of judgment, in one who ordinarily may appear wholly incapable. When the external organs, more especially those of sight and hearing, remain unimpaired, the mind will be found active and vigorous up to the latest period of life ; it is only where these have become impaired, that the mind appears to partake of the corporeal decay. There is often in old people a remarkable loss of memory, especially of the names of persons or things, and of events of recent occurrence ; whilst events which occurred many years before, even in early life, are minutely remembered, and the names of the actors correctly retained ; but in all probability the impressions made on the mind in early age, when all the organs possessed greater power and activity, were much more deep, and therefore more durable ; that the impressions made in old age are more slight, and hence more evanescent ; again, probably the events of early life had been often in the course of past years recalled by memory ; that is, the

original impressions had been, as it were, strengthened by repetition. Again, I think it will be found in such persons that memory is not the only faculty of the mind that appears to be failing ; the perception will also have become less acute ; the imagination less vivid, but these facts are seldom noticed by the old man. " My mind is gradually getting weaker," he will say ; " I cannot remember things as I used to do—I forget even what happened yesterday ;" but he does not observe, or at least does not complain, that the play of his imagination has ceased ; that the days of poetical fancy have gone by ; that he no longer perceives things by means of the external senses, with the clearness and readiness of former times. Why, then, should he expect the memory to retain its former power ? nay more, why should he expect it to recall the weak impressions of age with the same facility as the powerful perceptions and vivid imaginings of early life ? Whether we believe the brain to act as a whole, or in distinct portions, it is easy to understand that as it becomes altered by age (indurated), the mental faculties dependent on its actions will become more obtuse ; whilst the judgment, the great reasoning faculty of the mind, being wholly independent of matter, remains unimpaired.

The power of procreation ceases early in women ;

often, indeed, long before the period of age. In men, it continues to an indefinite period, becoming gradually less and less. The urgency of desire and the power of exertion gradually diminish, until at length they cease altogether ; and the genital organs, being no longer required, shrink considerably in size ; the testicles become soft and pulpy, and sometimes almost disappear. In women, the ovaria shrink, the mammae become soft, pendulous, and diminished in size ; and the uterus shrinks into a very small volume.

The circulation of the blood continues with but little change until the end of life. The heart becomes weaker and slower in its action, but goes on regularly, driving the blood to, and receiving it again from, all parts of the system. The pulse is slower, and the wave of blood feels more equable under the finger ; there is less sensation of tonicity in the arterial tubes, as if they exerted less influence in the circulation of the blood, and were more passive than formerly ; sometimes there is a harshness in the feel of their coats, but this I regard as a diseased condition.

There are many causes which impair the digestive powers in old age ; the chief of these is the loss of teeth, which decay or become loose, and drop out : hence the jaws approximate to each other, and the chin projects ; the toothless gums are unable to tear

the food, which therefore passes into the stomach without the very important preparation which it should receive by full mastication ; yet, even in advanced age, the digestive functions go on tolerably well.

Even as the circulation of the blood continues to keep up the vitality of the body, so the nutritive organs continue to supply to the blood fresh matter, and the bowels, kidneys, and skin, to eliminate the refuse. The absorbents carry off portions of the former, which the secretory organs renovate ; and, as long as these reciprocal actions of organic life go on, the individual continues to live a passive and inactive state of existence, the duration of which is wholly uncertain. The slightest impediment may readily stop the whole :—

“ From nature’s chain whatever link you strike,
Tenth or ten thousandth breaks the chain alike.”

But, unless something does occur to interfere with this regularity, it is really impossible to say how long this train of actions, dependent on each other, may continue ; or, in other words, no one can say how long a man can live, so long as food continues to be supplied and digested. Organic life goes on, and this with but little reference to its twin brother, animal life, which may be suspended or may have almost ceased. In this state of extreme decrepitude, the individual may seem

to be unconscious of external impressions, scarcely capable of thought, speech, or action, and yet live on for some time. Even as it occurs at all ages during sleep, that although the animal and mental powers are quiescent, and, indeed, appear to be for the time dead, yet that life is sustained by the organic system alone : so in extreme old age, although the animal powers are almost lost, and the mental powers are incapable of giving any manifestation of existence, yet the individual lives a kind of vegetable life, until some accidental occurrence or derangement breaks the chain of digestion and circulation, and thus closes the scene.

PART II.

ON LONGEVITY.

CHAPTER I.

ON THE DURATION OF LIFE.

THE desire to live long and to live healthfully is perhaps universal, and leads naturally to an inquiry as to the probable duration of life. In estimating this we must be guided, 1, by our knowledge of the structure and functions of man; and 2, by the history of the lives of those who have lived longest and most free from disease. It is true that very many of such instances may be regarded as exceptional, and that perhaps the ages recorded are in many cases greatly exaggerated; but, making due allowance for all this, there remains a sufficient number of well authenticated instances of great longevity to encourage the belief that the usual term of human life is far below that which men are

capable of attaining. It may perhaps be true that not more than one person in 10,000 attains the age of 100 ; but it must not be forgotten that at least half of the number probably die in infancy, and that of the remainder, perhaps, not more than two-thirds attain maturity. Then, let us enquire how many of those who attain a healthful maturity, die, in the course of nature, of old age. Setting aside the large number who fall victims to accident, violence, epidemic or contagious diseases, circumstances which must be regarded as occasionally inevitable, the greater number of mankind die from disease, that is, become the victims of their own faults or follies ; or sink into early graves in consequence of natural feebleness of constitution, or of some hereditary tendency to disease, that is, in consequence of the vices or follies of their ancestors. They who do not inherit or acquire disease, and who therefore can attain the natural limit of their existence, are a comparatively small number ; yet it is this small number only that we have to consider when we ask ourselves—What is the extent of longevity which a healthy individual may hope to attain ? And how may he be best enabled to enjoy life, even until its close ?

Longevity simply implies length of life, the greatest extent of time to which an individual should live, if no accident supervene to cut short his career, or the

occurrence of any disease induce premature decay and death. This must necessarily be a variable period ; races, nations, families, individuals, differ as much from each other in 'longevity as in feature or character. Yet for each the same question will arise—How long may a healthy individual hope to live ? Does the extent of the time depend in any degree upon himself, or the circumstances in which he is placed ?—I believe that the answer should be in the affirmative, and will endeavour to show this ; but there are others, whose opinions demand great respect, who take a widely different view of the subject ; who believe "that a certain stock of vital power is imparted to the embryo at its first formation, as a provision for carrying it through its destined course of existence. In every act of the system a portion of this power is expended, and the greater the expenditure the less must there be remaining, till at length, the whole being consumed, all movements cease, like those of a watch which has run down, and of which the main spring has ceased to act."

(*Cyclopaedia of Medicine*, art. "Age.")

It seems to me impossible to entertain so mechanical an idea of the vital power. If it were true, the duration of each life would depend mainly on the greater or less degree of energy and activity in the individual, the slothful being who merely lived to eat and drink,

sleep and digest, who avoided all active exertion of body or mind, would surely wear out but slowly the stock of vital power, and attain to an advanced age ; whilst he who for his own good and pleasure, and the advantage and happiness of those around him, availed himself continuously of his great capabilities, actively employing the powers of body and mind, and yet duly recruiting them by food and rest, would much more quickly exhaust the quantum of vital power originally given, and sink into an early grave ; the watch having run down sooner, because it was going quicker. But is this the case ? Do slothfulness of body and inactivity of mind conduce to longevity ? or is not the active employment of all the powers with which humanity is endowed, needful to the preservation of health ?¹ If the infant were indeed endowed with a definite quantum of vital power, which it required a certain number of years to wear out, such vital power would be greatest when most accumulated ; consequently greatest in the state of infancy, and the vital power of the infant, that is to say, the power of resisting hurtful or noxious agencies, as cold, miasmata, poisonous substances, or impure atmospheres, would be greater in the child than in the man. But is this so ? It is somewhat difficult to understand how the body could advance

¹ Dr. Rush observes that he never knew an idler long-lived.

from infancy, increasing daily in development, size, and strength, although losing daily a portion of vital energy. In order to carry out the hypothesis, we must imagine either that, as with each day of life a portion of vital power is used up, the remaining stock acts with less force ; and if so, man is strongest the first day of his existence, and becomes gradually weaker and weaker until its close ; or we must suppose this vital power to be enabled, by some unknown arrangement of the machinery, to act, as in the watch, with equal force at all times ; and, if so, the vital power would be equal at all periods of life, from infancy to age. But is this so ? But the vital power, or at least its activity (whatever it may be), depends as much on the processes of the animal economy, as they on it. It would become feeble without activity ; it would sink without nutrition, and its intensity depends then nearly as much on the conduct of the individual, as the due performances of the processes of the economy depend on it. Let us dismiss then the idea of a certain endowment of vitality, and rather believe that the duration of human life is altogether unfixed and uncertain, but dependent on the integrity of the organs of the body and the due and regular performance of their functions.

But what is the natural period of the duration of human life, that period to which a healthy individual

might hope to attain? There is no point on which writers more widely differ. Buffon regards 90 to 100 as the natural age of man. Hufeland, after carefully examining the question, says, “ Experience incontestibly tells us that a man may attain to the age of 150 or 160 years ;” and again, “ We may therefore, with the greatest probability, assert that the organisation and vital powers of man are able to support a duration and activity of 200 years.” (*Kunst das Leben zu verlängern*, cap. VI.) “ One may lay it down as a rule,” he says, (and in this he follows the opinion of Buffon,) “ that an animal lives eight times as long as it grows. Now man, in a natural state, when the period of maturity is not hastened by art, requires full twenty-five years to acquire his complete growth and conformation, and this proportion also will give him an absolute age of 200 years,” (*loc. cit.*) On the other hand there are many who look upon such a mode of reasoning as absurd, and such opinions as wholly worthless. An able writer in the ‘*Cyclopædia of Medicine*,’ vol. iv, p. 63, says “ An individual could scarcely be suspected to be in possession of common sense or information, who should hope by any mode of diet or advantage of constitution to exceed the age of 100.” He regards all such instances of longevity as decided exceptions to the general rule of maturity, in fact as abnormal ; yet they are too

numerous to be altogether so considered. Haller long since stated that more than 1100 persons had been known to attain to various ages between 100 and 169. In order to ascertain, then, how long a healthy man may hope to live, let us enquire how long men have been known to live in all times, and deduce from such facts a reasonable probability.

I will enumerate (from Hufeland) a few instances amongst the ancients, as the tables hereafter given show, commence only in comparatively modern times. "Amongst the ancient Jews Abraham lived to 175 years; Jonas to 180; Jacob to 147; Ishmael, a warrior, to 137; Sarah to 127; and Joseph to 100. Moses, who speaks of the ordinary age of man as three score and ten, lived to 120; and Joshua to 110; Elisha exceeded 100. Amongst the Greeks, Epimenides of Crete is said to have lived to 157 years; Georgius, of Limiton, to 108; Isocrates to 98; Zenro, the founder of the Stoics, to nearly 100. Amongst the Romans, M. Valer. Corvinus exceeded 100; as did also Oribilius; Tautia, the wife of Cinna, lived to 103; Luceja, an actress, performed a whole century, and appeared in public at the age of 112; Galeria Copiola, an actress and dancer, first appeared on the theatre at the age of 90; she afterwards performed as a compliment to Pompey the Great, and again, to show her respect for Augustus Cæsar.

Pliny states, from the record of a census taken during the reign of Vespasian, a source perfectly sure and worthy of credit, that there were living in the year 76, in Italy, in the district between the Appenines and the Po, 124 persons who had attained to the age of 100 years and upwards, viz.: 54 of 100; 57 of 110; 2 of 125; 4 of 130; 4 of 135-7; 3 of 140. Besides these there were in Parma 3 persons of 120, and 2 of 130; in Placentia 1 of 130; in Favalia 1 of 132; in Villicarum, a small town near Placentia, there then lived ten persons, 6 of whom had attained the age of 110; and 4 of 120." (*Loc. cit.*) — As to more modern times, the tables appended will show above 7000 instances of persons who lived to ages between 100 and 185 years; and the more that these and other similar collections of examples are examined into, the more will it be found difficult to say to what extent human life may endure. It is unquestionably true that many of these instances can only be regarded as exceptions to the general law of mortality, yet they distinctly show that life may extend to a very much longer period than is generally the case; and that if 70 years be at present the usual term of life, and 80 be regarded as an instance of very old age, yet there is good reason to believe that if the attention of mankind were directed to the subject, the duration of

human existence might be greatly prolonged ; and I do not think it too much to assert that well made and healthy individuals, the offspring of healthy parents, who have attained maturity in a state of health, and live in such a manner as to avoid disease, ought to regard a high degree of longevity as the ordinary rule of mortality, not as a favorable exception to it.¹

¹ The Carlisle tables give 9 lives in 10,000 to attain 100 ; but only 4727 of those attained to 40 years. It is usually considered that females live longer than males, and the government annuity tables and those of several insurance companies are based on this supposition ; but although this may be true up to the age of 70 or 80 years, yet, I believe, that more men than women reach a very advanced age. Mr. Easton's list of 2170 lives exceeding 100, contains only 853 females.

CHAPTER II.

ON THE CAUSES OF LONGEVITY.

WHAT is the cause of longevity? It cannot be climate; for, although it is generally believed that cold countries are more favorable to length of life than warm ones, and although, undoubtedly, some climates may be more healthful than others, yet in no climate or country do the majority of the inhabitants attain to a very advanced age; and a glance at the tables will show that every part of the world has contributed to their formation.¹

¹ Dr. Bisset Hawkins gives the following as the relative mortality of various countries annually:—

England	1 in 60	France	1 — 40
Pays de Vaud	1 — 49	Naples	1 in 35
Sweden	1 — 48	Wirtemberg	1 — 33
Holland	1 — 48	Prussia	1 — 33
Lombardy			1 — 28

and he rightly refers the wide difference between countries, rather to the customs and food of the inhabitants, and the advance of civilization, than to climate. This is evident from the fact, that whilst in England, in 1780 the annual mortality was 1 in 40, in 1801 it had decreased to 1 in 47; so in France, in 1781 the mortality was 1 in 29, in 1802 it was 1 in 30. In 1817, there was a great scarcity of food in Lombardy, and the deaths averaged 1 in 14. Large towns, too, differ widely from

Class of life seems as little to be the cause of advanced age. Most of the instances of very long life are to be found amongst the labourer, the pauper, and itinerant beggar; yet the lists contain the names of many noble lords and ladies, and of all conditions between the two. Much stress has been laid upon a country life and the free country air; but, I think, more than is just. It is true that most of the instances of great longevity are derived from the country, yet many persons attain a very advanced age in towns. We should rather regard the habits and occupations of the individuals than their place of residence; and it is manifest that, generally speaking, they will be simple and more healthful in the country than in cities. The tables contain very many instances of longevity among paupers dying in poor-houses in London.

Rejecting then climate, social position, and place of each other in their relative rate of mortality. I take the following from the same writer, as an approximation to the truth. There dies annually in

London	1 in 40	Naples	1 in 28
Berlin	1 — 34	Rome	1 — 25
Paris	1 — 32	Amsterdam	1 — 24
Madrid	1 — 29	Vienna	1 — 22½

Whilst these statements show that human life endures longest, where men are most civilised and best clothed, fed, and governed, they also encourage the belief, that a high degree of healthful longevity may be attained by many individuals, and may also be greatly promoted by wise government.

residence, we must seek for the causes of longevity in what concerns the individual, in his original stamina, in the healthfulness of the parents from whom he sprung, in his habits, avocations, and mode of life; in his immunity from the attacks of diseases, in equanimity of temper, and freedom from great and frequent excitement.

If we desire that a tree or a flower should attain great maturity and beauty, we should be careful that the seed be well chosen, or the cutting from a most healthy source; or if, in domestic animals, we sought to produce specimens of beauty, strength, and usefulness, we should be careful to breed from well-chosen specimens of each species; in the progress of growth we should supply everything which would yield nutrition, and promote healthful development; carefully guard against all hurtful agencies, and, at the period of maturity, do all things which would tend to maintain that maturity, and to prevent the accession of decay. If we did all this well, our conduct being guided by correct judgment and enlarged experience, we should doubtless be rewarded by producing specimens of animal and vegetable life, far surpassing in beauty, strength, and utility, those ordinarily met with.

The exhibitions at botanical and horticultural gardens, at cattle and flower-shows, at races, fairs, and

market-places, eminently demonstrate the improvements which may be made in the productions of nature by science and skill. If the same care were taken in the producing, sustaining, and perfecting human beings, I do not doubt that the human race would be equally improved, that the duration of life would be greatly increased. Disease would be less frequent, and disarmed of half its terrors. Mankind would become more healthful and vigorous, and the attainment of 100 years of age would cease to be a favorable exception to the usual length of life, and become perhaps the usual period of mortality. Animals well born and well bred very often pass through life without the occurrence of disease, even although in the unnatural condition of domesticity; and men are sometimes met with who have been equally free from derangements. This should almost always be the case; and if we cannot arrive at such complete immunity from ill, let us at least examine how we may best approach it.

By an examination of the tables of longevity, it will be readily seen that a vast number of those who attained a very old age passed through life remarkably free from disease; many never were ill, never took medicine, retained the powers of body and mind in a state of comparative vigour until the very latest period, and

seemed to sink suddenly into the arms of death without passing through any period of decay and decrepitude. This was remarkably the case with a gentleman who is not included in the tables, as he did not reach 100, but died in his 99th year. I knew him well for many years ; he was a hale, handsome old man, not looking his age, remarkably healthy, active, and intelligent. He was accustomed to rise early, and walk in the garden before breakfast. One morning about seven o'clock he rang for his servant, said he felt chilly, and wanted to take a cup of tea before rising. Within an hour from that time he was dead. His eldest son, now living, 78 years old, is remarkable for his personal strength. His teeth are perfect, his luxuriant hair retains its original colour, his intellectual powers are vigorous, he is of active habits, walks much, eats freely, but never takes wine, and has altogether the appearance of a well-looking man about 60. His eldest daughter, now 77 years old, retains much of the figure, activity, and appearance of youth, and would scarcely be thought more than 55 years old.¹

¹ See also Tables :—TABLE I.—Nos. 101, 122, 145, 158, 204, 228, 324, 425, 471, 528, 536, 575, 637, 650, 683, 687, 770, 778, 815, 823, 836, 843, 858, 870, 872, 908, 917, 921, 935, 936—945, 968—981, 987, 992, 1006, 1010, 1019, 1023, 1026, 1028, 1038, 1051, 1062, 1063, 1074, 1077, 1098, 1326, 1328, 1330, 1331, 1348, 1352, 1363,

Thus, in the endeavour to attain longevity, we are studying also to pass through the period of age with a certain degree of immunity from suffering and disease, and to diminish or annihilate the stage of decrepitude and helplessness. We not only desire to learn to live long, but how to enjoy life up to its very close.

Original Constitution and Hereditary Tendencies.—Unless the physical development of the infant be good, it would be absurd to anticipate a vigorous manhood, or a healthful old age. In this respect, unquestionably, “the child is father to the man;” but there are many gradations from a perfect physical development to that state of imperfection which would render the attainment of an advanced age impossible. Referring again to our Tables, it will be seen that a tendency to longevity, or, I ought rather to say, a capability of

1382, 1396, 1397, 1398, 1399, 1403, 1404, 1405, 1406, 1409, 1410, 1415, 1422, 1423, 1425, 1426, 1445, 1450, 1460, 1472, 1474, 1483, 1484, 1485, 1488, 1505, 1506, 1510, 1511.

TABLE II.—Nos. 30, 31, 40, 46, 74, 75, 76, 90, 142, 208, 214, 217, 229, 232, 234, 237, 238, 243, 246, 249, 255, 257, 263, 272, 286, 288, 291, 292, 296, 297, 301, 302, 303, 310, 311, 315, 319, 339, 344, 347, 348, 349.

TABLE III.—Nos. 11, 39, 50, 55, 57, 59, 61, 62, 73, 88, 89.

,, IV.—Nos. 2, 4, 5, 10, 12, 14, 22, 25, 26.

,, V.—Nos. 5, 6, 9.

,, VI.—No. 9.

attaining old age, is clearly hereditary.¹ Thus, it is related of Thomas Field, a labourer of Bexford, Herts, who died aged 102, that his father was aged 104 years, his brother was 95, his uncle 93, and that scarcely any of his family died under 90. P. Marion, a Dutch fisherman, died at the age of 109; his father lived to 107, and his grandfather to 116. The celebrated Thomas Parr lived to 152 years; his son to 113; his grandson to 109; and his great grandson to 124. Two other grandsons, by his daughters, lived 127 years each; and the tables will show many other instances, proving that longevity is in some families hereditary.

If the importance of breeding animals from a healthy stock be granted, it is surprising to observe how daily in the world all regard to this first requirement for insuring health, happiness, and longevity is neglected. How dreadful it is to observe that in the selection of wives and husbands, this, which should be the *first*, is

¹ Ruysch observes, that he never saw a person of 80 years old whose ancestors had not also been long lived.

See also the Tables of Longevity:—TABLE I.—Nos. 21, 104, 194, 284, 617, 623, 853, 869, 1107, 1231, 1343, 1352, 1357, 1429, 1498.

TABLE II.—Nos. 46, 245, 260, 300, 321.

„ III.—Nos. 8, 18, 24, 27, 48, 57, 73.

„ IV.—Nos. 13, 14.

„ VI.—Nos. 5, 9.

but too often the *last* consideration ;—that wealth, station, beauty, accomplishments, are each in turn sought for and appreciated, without inquiring whether the seeds of gout, consumption, madness, &c., be also a part of the dowry of the bride, or of the possessions of the bridegroom. Surely one would suppose; that whilst there is so much and so laudable an anxiety to transmit to offspring honorable titles and distinctions, and accumulated possessions, it would be also a prominent desire to endow them with such a physical and mental development, as would enable them to appreciate duly their worldly blessings, and to enjoy them for a length of time ; but alas ! this is not so. As truly as “that charity covereth a multitude of sins,” so surely do personal beauty, great talents and accomplishments, a coronet, or a large estate, not only cover too many personal and mental defects existing, but completely prevent all anticipations of the evils which may come after.

Few that have attained longevity have passed a life of celibacy ; indeed, many of those whose lives are quoted, have been married often ; and it is curious that in many instances the man and wife have died within a very short time of each other : thus showing, that whilst in all probability the mode

of life adopted was conducive to health, the pleasures of domesticity and companionship were not less so.¹

¹ Hufeland lays great stress on the wise employment of the generative powers. "I am acquainted with no instance," he says, "of eunuchs having attained to a remarkably great age. They always continue to be only half men. All those who attain to the highest degree of longevity were abundant in the generative power, and it remained faithful to them to the last period of their existence. They married often in their 100th year, or even later." (*Loc. cit.*, vol. i, chap. 8.)

See also Tables:—TABLE I.—Nos. 31, 73, 235, 457, 478, 503, 544, 575, 608, 677, 717, 1003, 1129, 1175, 1347, 1467, 1489, 1500.

TABLE II.—Nos. 4, 18, 22, 34, 75, 140, 226, 243, 315.

„ III.—Nos. 62—92.

„ IV.—Nos. 11, 22.

„ VI.—Nos. 5, 6.

CHAPTER III.

ON THE MODE OF ATTAINING OLD AGE.

HAVING thus endeavoured to show the extent to which human life may be capable of enduring, and having examined into the natural causes of longevity, it remains now to inquire how far the conduct of the individual may tend to procure it.

Presuming, then, the essentials of a sound constitution derived from healthful parents to exist, and presuming that the individual shall have attained the age of maturity free from disease, or uninjured by any attacks of disease which may have occurred, how shall he so conduct himself as to lengthen out that condition of life we call Maturity? to change it gradually into age, and be gathered at length by the hands of death, as a fruit still perfectly ripe, not slowly shrinking, shrivelling, and decaying, until it drop.

A healthy individual at the age of maturity may best discover how to prolong that condition by considering how it has been attained, and by comparing

the condition to which he has arrived with the starting period of his existence. "Gray hairs peruse thy days, and let thy past read lectures to thy last."

He has attained a vigorous maturity by the regular exercise of all his mental and corporeal powers, by the due performance of all the functions of the frame, so as to stimulate, sustain, and invigorate each other: by avoiding the undue exertion of any one above the rest, which could only lead to the weakening of the one so employed, or to the sustaining it unnaturally by the sacrifice of some other. In the human microcosm each part, each function, although perfect in itself, is never self-reliant, but is sustained by the rest, and in like manner aids in supporting and invigorating the whole, whilst all thus act consentaneously; but should any one part be injured, or its functions inefficiently performed, the injury and failure of others is the natural result of their mutual dependence.

"Thus if each system in gradation roll,
Alike essential to the amazing whole;
The least confusion but in one, not all
That system only, but the whole must fall."

I do not mean by this to advocate any fixed monotonous regularity of conduct (particularly in early age), which would rather weaken than strengthen the general system, by making the individual a creature

of habit, accustomed to a certain limit of activity only, and incapable of anything beyond, and likely to sink at once, on any call that might be made for extra exertion.

The longest lives—soldiers, paupers, labourers, &c., have mostly been those who were often exposed to many and varied changes, and who were constantly called on to make considerable exertions; for such exertions rather sustain than exhaust, and invigorate the general system by calling forth the variety of its powers and resources; but if any attempt be made to increase indefinitely the natural powers, whether of body or mind, a general decay or destruction of both will be the consequence. When, for example, it be attempted to attain excessive muscular power by constant practice and exertion, by the taking undue quantities of solid or nutrient food, or by any of those means familiar to trainers for the prize-ring, an undue balance between the functions of nutrition and absorption results, the quantity of blood is increased, the circulation stimulated; and, in a word, a plethoric condition induced, which may tend to the development of any hereditary disease, or the formation of some new evil. If the powers of the mind be overtaxed, if the brain be worked too long, similar effects will result,—too much blood will flow to that organ, the

due balance between the nutritious and regenerative processes will be broken, disease of the brain and of the whole nervous system will result.

It must always be borne in mind, that there is a fixed limit to the healthy physical development of the body, and that this limit is fully attained at the period of complete maturity; that all that can be gained above this is an abnormal increase of some one or more organs, or a general deposition of fatty matters impeding the action of the limbs, obstructing the free circulation of the fluids, the easy play of the lungs, and generally diminishing the activity and strength of the individual. From infancy up to manhood is a period of the accession of parts. The frame has daily to be increased in size and completed in structure. The processes of organic life have two distinct duties to perform: 1st, to replace such portions of the frame as by the actions of life are worn out, and by the absorbent vessels are removed and cast out from the body; and 2dly, to deposit everywhere such additional matter as shall go to complete the structure and growth of each part. After the individual has attained complete maturity, the first only of these two processes is required. It is then only the duty of the nutrient functions to sustain the frame in perfect integrity, by replacing as much

daily as is used up by the wear and tear of physical and mental exertion. If too much be deposited, a state of plethora, general or local, is the inevitable consequence; if too little be supplied, a debilitated condition, general or local, a species of marasmus, is as certainly induced. Now it must be the first object with every one who desires to continue the condition of healthful maturity unchanged, to bear this constantly in mind, and so to regulate the actions which wear out the vital structures and the means by which they are nourished and reproduced as to sustain that balance which constitutes vigorous health. Let us apply this generally to diet, exercise, amusements, and conduct of life.

Diet.—Full-grown individuals require less diet than they did during the period of growth, for it is manifest that less is needful to replace the daily waste only, than was required to supply that and also *to complete the unfinished structures*; yet we generally find that indulgence in food is one of the most prevailing errors of advanced life; highly-seasoned stimulating dishes, generous wines, and a longer indulgence in the pleasures of the table, are often regarded as rewards which have been earned by a life of labour, and which may be rightfully enjoyed: hence the body habitually receives more food than is needful for its support, and

the consequence is either the necessity of stimulating the deferent organs to carry off the surplus by continually inducing a state of diarrhoea and diuresis, or a state of obesity occurs, which is too often the first sign of decay and the warning of the approach of others. Not only is too much food often habitually taken by persons advanced in life, but the stomach is too frequently supplied. That the process of digestion be performed healthily and vigorously, it is needful that the stomach should not only be void of food when taken, but should have been void so long as to have fully recruited itself from its previous labours;— hence there can be no more fit time for a full and solid meal than an early hour in the morning, when the whole system, being reinvigorated by rest, is peculiarly fitted to perform all its various duties. With most persons, too, the bowels are unloaded early in the day, the contents of the bladder expelled, and probably during the night perspiration has more or less occurred, the effete matters left from the previous day's nourishment have thus been cast off, and the body is in a fit state to receive a fresh supply.

A solid, nutritious, and somewhat full meal, taken at an early period of the day, is I believe one of the best means of sustaining the body in good health. Some observations will be hereafter made on the varieties of

foods and drinks ; but in truth the quantity taken, and the time when it is taken, is much more important than any fine-drawn distinction as to kind of food or mode of cooking. Queen Elizabeth and her ladies breakfasted on meat, bread, and strong ale. Our modern ladies take tea and coffee, and thin slices of toast or bread. The Esquimaux or Cossacks drink train-oil and ardent spirits. The inhabitants of France and Germany eat much more largely than we do of vegetable diet, and drink at all times of the day their acid wines. In Devonshire and Herefordshire an acid cyder is the common beverage, and in the Highlands of Scotland oatmeal porridge is in a great measure the food, and whiskey the drink, of the inhabitants. The Irish peasant lives chiefly on potatoes, and the Hindoo on rice. Yet all this variety and much more is digested, yields nutriment, and promotes growth ; affording undeniable evidence that man is really omnivorous, that he can be supported by great varieties of food. It remains, however, to select those kinds which may be best suited to particular individuals, and to the circumstances in which they may be placed.

The body, then, being thus prepared by a full nutritious meal, the individual may proceed to his daily occupations of body or mind, well sustained in his exertions by what he has taken until the close of the

day; when his labours being ended, and when the morning food having been long digested, and the stomach some time void, he may again take a full supply. I do not mean to object to some *slight* sustenance once about the middle of the day, when the stomach may be supposed to be empty, and especially in persons in whom habit has induced a want of food at that period; but such supply should be but very slight, and of the lightest kind. Heavy or plentiful meals should not be taken during the hours of labour or business, but be left until that period when the tranquillity of body and mind, rest and quiet, may promote a complete digestion. It may be objected that I recommend a full meal in the morning before proceeding to the labours of the day, but at that period the body has been so long without nourishment, that some is absolutely required, and the empty state of the digestive organs puts them in the most favorable condition for action. Again, it is neither usual nor wise to proceed to the labours of the day *immediately* after breakfast if it can be avoided, an interval of time and some gentle exercise would well promote digestion. In the middle of the day the case is very different; the office or the workshop is hastily quitted for the nearest place of refreshment, this is rapidly swallowed, and the place of labour is returned to as quickly as possible.

The digestive organs are not in the same condition they were early in the morning, and are not equal to the duty of digesting a heavy meal, at the same time that a great call is being made on the vital powers to sustain the laborious occupations of the body or mind, or perhaps of both.

It will be seen that I thus advocate relying chiefly on two meals daily, allowing, however, a slight refreshment or luncheon in the middle of the day, about which time there should be a pause from the labours of body or mind, and the whole system should be allowed a short portion of time to recruit its energies. Continuous labour for a long period, of whatever kind, can never be so productive as the same quantum of exertion would have been, if one or more clear intervals of rest had been allowed. The facile and complete digestion of food requires rest of body and tranquillity of mind, and cannot be so well or so quickly effected during the strain of physical labour or the turmoil of mental exertion. A mid-day dinner is a great error, the food is often hastily swallowed but half masticated, and difficultly and badly digested.

In selecting the kind of food most proper after the meridian of life, the great principle must be borne in mind that the object of nutrition is to sustain the body as it is, not to increase its bulk or power. It being

clear that nature intended man for an omnivorous animal, she has distinctly taught him that variety of food, a mixed diet, is suitable to his constitution, and that the restraining man to one kind of food is not only contrary to her dictates, but unsuited to his nature, and not fitted to promote health, strength, and length of days. Our foods are taken from the animal and vegetable kingdoms; both kinds are agreeable to the taste, and, by sound digestive organs, nutritious matter is plentifully extracted from each. The question then naturally arises, which is the better fitted for the food of man, and if they should be conjoined, which should predominate? I believe an easy reply to this question may be found by looking round the animal kingdom on those creatures who are sustained exclusively by the one or the other kind of food. The first thing that attracts observation generally is that those animals which feed exclusively on vegetables attain to great size, become often very fat, converting, by very elaborate processes of digestion, the vegetable matters they consume into vast masses of flesh, which flesh is intended to serve for nutrition to carnivorous animals, or to man. They feed very often, or indeed are perhaps in a state of nature almost continually feeding. Carnivora, on the contrary, make full meals at long intervals only, consume a much less quantity of food, and remain

after feeding as much as possible at rest ; they are usually much smaller in size than herbivorous animals, but much stronger for their size, having powerful muscles, but very little fatty matter ; they can endure hunger and fatigue very much longer than the herbivora on which they feed ; and it might not be very extravagant to regard the herbivorous animal as an intermediate being, in which the vegetable productions of the earth are so charged and prepared as to be fitted to nourish carnivora and man.

In the infant, the organs of digestion being imperfect, the food is previously prepared in the system of the parent. In early age increase of size being very desirable, a large portion of vegetable diet may be required, and a frequent supply may be allowed. When complete growth has been attained, the supply of animal food should predominate over the vegetable, in order that the body may be sustained in strength, without being increased in bulk ; and again, in advanced age, when the body is becoming attenuated, the supply of vegetable diet may be increased, provided the digestive organs retain sufficient power duly to digest it : this will often depend on the condition of the teeth, for vegetable diet requires to be more minutely divided and ground down, to prepare it for the action of the stomach, than is necessary when

animal food is taken. In judging of the quantity of food to be taken, a due regard should always be had to the habits and employment of the individual. The more labour there is to be performed, the more food is undoubtedly required, and although the general law should always be borne in mind that it is better to rest after full meals, yet when the labour is long and continuous, small portions of food should be taken at intervals, to sustain the vital powers in the exertion they are called on to perform ; leaving it, however, to a much fuller meal, at the close of the day, to recruit the waste which has occurred. Again, we may take a wholesome lesson from our habitual conduct to the animal kingdom, of whose welfare we are often much more chary than of our own. A traveller having a long day's journey to perform will give his horse a full mixed feed before starting, and small quantities of oats only at various resting points on the road ; but when the useful beast is stalled up for the night, another full mixed feed will be allowed, and then, too, a rackful of hay, a more cumbrous but less nutritious food than oats, will be given. In the same way, if a man should apportion the quantity of his food to the labour, whether mental or bodily, he has to perform, his most full and mixed meals should be in the morning and after all work is done ; between these two so much

only of nourishment should be taken as may be necessary to sustain the vital powers in the exertions demanded of them, and these intermediate portions should be as few and as small in bulk as possible, animal rather than vegetable diet.

Much of what has been said of solid food will apply equally to fluids, that is, it would be unwise to take any considerable quantity of drink in the middle of the day during the hours of active employment. Fluids taken in undue quantity fill the vessels, oppress the stomach, over-stimulate the kidneys, and promote obesity. If they be vegetable infusions or decoctions, as tea, coffee, cocoa, &c., they of course partake of the qualities of their bases. If they be fermented or distilled liquors, from the poorest ale or wine to the strongest spirits, they are stimulants, and, as such, are more or less useful or hurtful according to circumstances.

Water and milk are simply nutritious fluids, and must be always useful, if not taken in such quantities as to be inconvenient from their bulk. It is impossible to lay down any general rules for the use of these drinks; the idiosyncrasy of each individual must be the chief guide, and his habits must be duly considered. As to the vegetable infusions usually taken as breakfast drinks, tea and coffee are both slight nervous stimulants. Cocoa and chocolate are oleaginous and nutri-

tious. It is manifest, then, that the two latter, if well prepared, must be unexceptionable; yet they have none of the agreeable pungency and stimulant effects of the former two; and I confess that if these qualities be willingly dispensed with, and a drink be desired merely to slake the thirst, and supply some nutriment in a fluid form, I think that milk, or milk and water, would be really preferable to any other. It is true that persons of delicate nervous temperaments are often painfully excited by strong tea, especially green tea, and that it frequently, when taken at night, prevents sleep. Coffee has the same anti-soporific power; it differs from tea, exciting the nervous system less, but the arterial more. The pulse is often quickened, and the skin made hot by strong coffee; yet both these beverages have their charms; they are to most persons particularly agreeable to the palate, producing a mild pleasurable degree of excitement, and are thought, if taken only in small quantities, to promote digestion. On the whole, I believe that the evils of tea and coffee have generally been much exaggerated; they may be hurtful to dyspeptics, but there can be no objection to their moderate use by persons in good health; and we are not now considering any other.

Nearly the same may be said of the more mild stimulating drinks, as the various kinds of beer or ale,

the various kinds of wine. All these are diluted alcoholic liquors, the produce of the fermentation of vegetable matter or fruits, consequently all are stimulant, and if taken in large quantities, all are intoxicating. It is therefore certain that a robust man in health should never take any of them to excess. Not a word can be said, seriously, in defence of intoxication, much less in recommendation of it; but it may fairly be asked, should they ever be taken at all? Does man in a healthy state ever require stimulants?—perhaps not. Perhaps pure water would at all times be man's best beverage when in perfect health; yet small quantities of these mild stimulants may be taken with impunity, and often with advantage, especially when labour, or study, or anxiety, has exhausted for a time the vital energies, and depressed the force of the circulation. We are not living in a state of nature, and it is absurd to argue all things as though we could be guided alone by the dictates of nature. Men at the close of a day's labour, whether bodily or mental, are often depressed in spirits, feel their nervous energy exhausted, and require some stimulant to excite them to take the requisite supply of wholesome nutriment, and perhaps to enable the digestive organs (partaking as they must do of the general depression) to convert that nutriment to a good and useful purpose. I cannot then but ap-

prove of the taking a moderate quantity of sound malt liquor, or of pure wine with the latter meal of the day, in order to stimulate the digestive organs to that due performance of their duties, which the rest from labour, about to be enjoyed at that time, fairly allows. In all these drinks, the products of fermentation, the alcohol engendered is mixed up with saccharine and vegetable matters, which, besides that they are more or less nutritious, take off from the strength of the spirit and modify its effects. With regard to spirituous liquors, properly so called, that is to say, such as have been extracted by distillation from these fermented juices, they are devoid of all nutritious qualities, are purely and strongly stimulant, burning and sharp to the taste, highly exciting to the arterial and nervous system, and injurious to the mucous membranes of the throat and stomach. *They can never be required by persons in good health, and should never be taken but as medicines, when an abnormal condition of the health may demand stimulation.*

Let not then a healthy individual in middle life follow any definite rule of diet, but be guided in his judgment by the principles explained; let him apportion the quantity of his food and the frequency of the supply, to the nature of his daily occupations, the variety of labours he may be called upon to perform,

and to those peculiarities of constitution which vary with each individual, at all times remembering, that he does not “live to eat,” but that he “eats to live,” and that the frequent indulgence of his appetite and palate, beyond what is needful for duly recruiting and sustaining the body, will assuredly lay the foundation of disease, and hasten the approach of death.

The next important point of our subject is Exercise, and by this, I wish to be understood, not merely locomotion but such rational employment of the physical and mental powers, as shall constantly keep all their relative organs in a state of healthful capability of action. The active employment of the mind is certainly, if not essential, highly conducive to the preservation of health. Every one, whether urged on by the stimulus of necessity or not, should have some primary pursuit, some object which he may strive to attain and the pursuit of which will not only give him pleasure, but keep the faculties and energies of the mind in a vigorous condition ; but such pursuit—be it business, literature, politics, or any other—must not be allowed so to engross the whole man as to prevent relaxation and physical exertion. The pursuits of literature, politics, or commerce are often of so exciting a kind, that in place of the powers of the mind being exercised, they are too often overtaxed and fatigued. Honour, power,

or praise acquired, stimulates to increased exertion ; the ardent student, the ambitious politician, the eager merchant, forgetting all but the one object before them, labour and labour on ; having recourse to artificial stimuli to recruit the wearied powers, taking no amusement, neglecting to take bodily exercise in the open air, until gradually, dyspepsia, sleeplessness, and other ailments supervene, the mind becomes less vigorous, the memory less retentive, the perception less acute, the judgment less accurate, and a gradually increasing imbecility of mind and weakness of body compel the abandonment of those pursuits, which, if they had been more wisely followed, might have led to fortune, fame, and honorable distinction. It is especially in the meridian of life, when the mental powers are perhaps most fully developed and demand to be most actively employed when the mind is really capable of so much, that there seems no limit to its capabilities ; it is then this fatal error of over-taxation, of too continuous labour, is most common. But let the man of superior genius, learning, or talent, pause well ere he thus wear out the great gifts with which Providence has endowed him ; let him remember that his duty to all mankind, no less than to himself, calls on him to preserve his great powers in their integrity for many years, not sacrifice them in a few ; and how may they

thus be preserved? Simply by not over-taxing them, by systematising their exertion, by allowing the mind periods of relaxation from deep thought and laborious exertion, by alternating pursuits, of a less serious and exciting character, or even by joining in amusing frivolities. The relaxation of the mental powers must be found not in merely resting, in merely quitting for a time the absorbing and fatiguing employment, but in change to some other less severe occupation; for if no new occupation be entered upon, the mind still dwells on the old one, and ponders again and again on what has been done, and what remains to do. This is not rest, or at best, it is like the troubled sleep of a conscience-stricken dreamer, painful and unrefreshing. Let therefore the mental labourer, who would preserve his powers and lengthen his life, limit the periods of his exertion; and between them, by slighter pursuits, by amusements, and the agreeable converse of friends, allow the higher powers of his mind, to recruit themselves for fresh exertion. All these observations are, *cæteris paribus*, just as applicable to bodily as to mental exertion. When the muscular system is in full vigour, the regular exercise of all its parts is requisite to maintain its power, not the exertion on any one part alone, but of all. Much has been said, and much may still be said, of each particular mode of physical exer-

cise which the fashion may direct, or the inclination of the individual lead him to adopt. Walking, running, athletic games, as cricket, and the like; horse-riding, fencing, rowing, dancing, gymnastic exercise, &c.; all of these are good, and each one may be applicable to peculiarities of health or disease, and as such, must be pursued under the direction of competent judgment. Each one in turn, or a change from one to the other, may certainly be advisable.

There is, however, but one mode of physical exertion which is superior to all the others for a man in health; which should never be dispensed with and which might almost stand alone from all the rest; this is *walking*. Manifestly the most natural mode of exercise, it should never be dispensed with, whatever others may be adopted. It is true that it will not give rise to great bodily strength, that is, it will not cause great development of the muscles of the trunk, and superior extremities; and for this reason, cricket, quoits, or other such games or well arranged gymnastic exercises are especially in early manhood highly useful, for in these games and exercises, all the muscles of the body are alternately brought into play, under the guidance of the mind, which is just sufficiently roused into action to employ, but not exhaust its powers. Fencing, rowing, horse-riding, &c., are certainly excellent exer-

cises, often advisable, and in a state of health never objectionable ; but in none of these is there a regular employment of all the locomotive system, and in each of them many important muscles of the body are often left wholly unemployed. It has been said, when speaking of mental exertion, that merely abstaining from labour is not relaxation, that to divert the thoughts into another channel is absolutely needed. With bodily labours, the cessation is positive ^{*} rest; and although it may be true that an individual might proceed from one bodily exertion to another, as from walking to riding, with much less fatigue than would arise from continuing either for a lengthened time, yet if fatigue has really been induced by whatever physical labour, absolute rest is the best and only relaxation. The most complete relaxation of the animal system, the most perfect means of allowing the restoration of the physical and mental powers after great or continuous exertion is—Sleep. It is, in truth, the rest of the brain, and, hence, of all that is dependent on the brain for action ; locomotion, and every variety of bodily exercise and exertion, demands and exhausts the nervous energy, and is, therefore, as much an action of the brain as any operation purely mental. We may not be conscious of each act of volition by which bodily exercise is brought about, but the continued repetitions

and changes of such acts setting in motion certain sets of muscles, is essentially a mental labour, and the result is mental languor. When, therefore, we speak of being tired by walking, riding, or rowing, we really mean that the brain is tired of repeatedly or for a long time continuing to transmit to certain sets of muscles the dictates of the will. All labour which we have the power to control is mental, and this is the one great difference between the muscular actions of organic and animal life ; the former, as respiration, circulation, assimilation, &c., go on incessantly, they are independent of the brain and never require rest ; the latter are occasional, depend wholly on the brain, are under the control of the will, and imperatively demand rest. Sleep, then, is absolutely essential to the animal functions, the organic never require sleep. The most important corollary to draw from all this is that, as bodily labour is really a series of mental operations of an exhausting character, the changing one kind of exertion for the other is not really rest ; yet, the passing in any case from severe to slighter exertions may be an agreeable relaxation, when the exhaustion has not been such as to require absolute repose.

Conduct. In considering the conduct of a man, with reference to the conservation of his powers, and the prolongation of his life, we must always presume him

to be fully master of his own actions, wholly capable of so regulating his conduct as he shall think wisest and best. But this is very rarely the case, and indeed it is well that it is so, for every one should have some great primary pursuit, for honour or advantage, by which his mode of life and actions must be regulated, his energies be called forth, his mind and body actively employed, and one great hygienic rule be followed out; viz., to have always something to think of and something to do. The man of business, who, in place of seeking such a pursuit, should resolve to devote himself wholly to the preservation of his health, would soon sink into a mere hypochondriac; he would pass a miserable life, in guarding against disease, perpetually fearing death, yet never daring to enjoy life ; his mind would become exhausted by constant fear and watchfulness, and decay be induced by the excess of those means intended to keep it at bay. But such individual is not really in sound health, he is labouring under a diseased condition of mind, perpetually imagining or anticipating some ill, and really seeming to suffer evils which are not present and may never arrive.

“The coward dies a thousand deaths,
The brave live on.”

It is, therefore, manifest that the laws of health must be studied generally as a whole, not as strictly appli-

cable to each individual case, but the principles being fully understood and borne in mind, they are to be followed out as closely as circumstances will permit ; that is, subject to such variations or adaptations as the constitutional peculiarities of each individual, his pursuits and mode of life may render necessary. There is a whimsical anecdote extant of a circumstance said to have occurred at Berlin, several years since, which may warn against the too literal adaptation of abstract rules. Shortly after the celebrated Hufeland published, about sixty years since, his essay on ‘The art of prolonging life,’ it excited so much general attention, and such a furor of admiration, that a class arose who professed to take it as the guide of their lives, and to follow out the advice there given implicitly. They were called “Hufelandists,” and their proceedings, (I should rather say their follies) were the theme of daily observation. It happened one day, that a gentleman about 35 years of age, a renowned Hufelandist, strong, well-made, generally enjoying excellent health, became ill, and in a very short period died. All Berlin was astonished. How could this be? What could be the cause? Was Hufeland wrong? Was the whole system false and delusive, and should it be cast aside altogether? Whilst these questions were passing from mouth to mouth, a listener, more wise than the rest, replied, with a cynical smile,

“ Oh, no ! this event is no proof against the wisdom of Hufeland, nor against the justness of his precepts ; it arose purely from a sad accident. Our good friend B— followed Hufeland really ‘ ad literam,’ and deserved to have lived to the age of Methusalem, but, unfortunately, he possessed an early copy of the book in which there were some errors of the press, ‘ hinc illæ lachrymæ.’ He studied to live by slavishly and minutely following, without reflection or judgment, the laws set down in his book ; he followed in this way some errors of the press, and died.”

The human form at maturity has been not inaptly compared to a house well built and fully furnished.¹ The inhabitant enjoying its convenience and capability, whilst using each room in turn, would be desirous to keep the whole in good repair, watchful for the earliest signs of wear and decay, and careful to

¹ Man’s body’s like a house, his greater bones
Are the main timbers ; and the lesser ones
Are smaller splints : his ribs are laths daubed o’er,
Plastered with flesh and blood : his mouth’s the door,
His throat’s the narrow entry ; and his heart
Is the great chamber, full of curious art ;
His midriff is a large partition wall,
’Twixt the great chamber and the spacious hall :
His stomach is the kitchen, where the meat
Is often but half sod, for want of heat ;
His spleen a vessel, nature does allot
To take the scum, that rises from the pot :

avoid the one by repairing the other. Even so the spiritual tenant of this frail mental tenement must make himself well acquainted with its character throughout, learn well its strongest and its weakest points, so that he, too, may repair at once the slightest wear and tear, and avert the accession of decay. It should not be his desire to increase its size, capacity, or strength, the house is complete, the human frame at its maturity, but each individual should carefully seek to apply the general principles of hygienic science to his individual case, considering 1st, what are the causes which in him tend most to injure the frame and exhaust the vital powers; and 2d, how best to sustain and support them. The great causes of exhaustion are bodily and mental labour. The means of support are rest, nutrition, and the due performance of the functions of organic life, and the great point to be studied is the adjusting the one to the other. No

His lungs are like the bellows, that aspire
In every office quickening every fire :
His nose the chimney is, whereby are vented
Such fumes, as with the bellows are augmented :
His bowels are the sink, whose part's to drain
All noisome filth, and keep the kitchen clean :
His eyes are crystal windows, clear and bright ;
Let in the object, and let out the sight.
And as the timber is, or great, or small,
Or strong, or weak, 'tis apt to stand or fall.

FRANCIS QUARLES.

exact rules can be given, but general principles should guide the conduct. Long-continued exertion is unwise, and much more exhausting than the same amount of labour divided into different portions, and this is especially true as regards the labour of the mind, which induces greater exhaustion, and demands more frequently small quantities of sustaining nutriment, and more rest or amusement to restore its powers than mere physical exertion. Sleep is the most natural and best restorative after mental exhaustion and muscular fatigue ; it is a perfect cessation of action, a complete state of rest, during which the organic system can labour uninterruptedly to restore by nutrition the integrity of the animal powers. Sleep, then, is as essential as food, often more so, for it is well known that digestion is much impeded or altogether arrested by active exertion, and the individual completely tired would much rather sleep than eat, nature clearly pointing out which mode of refreshment is most needed ; yet when such a toil-worn individual awakes from his refreshing sleep, the demand for the restorative supply of food is most urgent. As to the length of time which ought to be passed in sleep no fixed rule can be given. It may be remarked that persons of middle age generally sleep more than is necessary or useful, and thus induce corpulency and its attendant

evils. Children and young individuals require much sleep to afford full time to the organic system to build up the frame. At mature age the time allowed for sleep should be varied, as the amount or severity of the labours performed during the working hours. Individuals, too, differ from each other in their habits, and in the demand of their constitutions; but from six to eight hours' sleep is, in general, ample for individuals in middle life and performing a fair average amount of labour. It may generally be safely said that, if an individual sleep soundly for a few hours and then naturally awake, he should at once arise; and not try to sleep again with a hope of being further recruited; the second sleep is rarely sound or refreshing, unless the awakening has been the result of some noise or some abnormal state of body or mind. In food and drinks, as in sleep, due attention should be paid to the idiosyncrasies of individuals; general rules can, however, be easily followed. 1. Do not take food, except when the appetite demands it, that is, do not recruit the system but when the system has become exhausted. 2. Let the quantity of restorative nourishment be proportioned to the degree of exhaustion which previous labours have induced. 3. Select such food or foods, drink or drinks, as your own experience and the general usages of society point out as best

suited to your habits, and easiest of digestion. 4. Let the food and drinks be varied and mixed, and when in health do not torment yourself by too close an attention to any dietetic rules. 5. Take vegetable infusions, as tea, coffee, and fermented liquors, in moderation; but avoid distilled spirits altogether, except under the guidance of the physician. 6. Avoid active exertion or study, immediately after taking food. The period after a full meal cannot be generally better employed, than by some of those lighter occupations, called amusements, which should fill up a portion of every-day life. "All work and no play makes Jack a dull boy," is an old and most true adage. The whole of a life cannot be well divided between the exhausting processes of labour and study, and the recruiting ones of feeding and sleeping; and the muscles will be rendered more firm, the step more elastic, the reasoning powers more acute, and the spirits be more buoyant, if the bow-string be often slackened, and slight amusements alternate with more serious avocations;—for amusements are still avocations, but of a less exhausting kind, and should especially consist in a change of pursuits.

The sedentary student should walk or ride in the open air. The active labourer should sit still, and divert himself by reading or agreeable conversation. Whatever images or associations are before the mind in

the hours of business, should be avoided, and images and associations as different as possible be sought for, so that the faculties which are exhausted should, as much as possible, lie dormant, and those be called into action which had been unemployed; thus the individual in middle age should pass, day after day, in healthful and laborious employments, alternating with relaxation and amusement; sustained by a due supply of nourishing food, and recruited for 6 or 8 hours out of the 24, by the total obliviousness of sleep. 7. Let prudence govern the passions. The action of the passions on the frame, in exciting or depressing its powers, would form a curious subject of investigation; for our present purpose, it is sufficient to remark in general, that whilst some, as fear, are directly depressing, appearing to act at once on the nervous system, others, as anger, revenge, &c., appear to affect more directly the arterial system, and to excite more or less powerfully the whole being. They resolve themselves into occupations of the mind, and may be regarded in that light as exciting in the first instance, and hence inducing greater or less depression, as the excitement has been more or less violent, or long continued. But there is one great master passion, or rather, perhaps, animal instinct, the effects of which deserve to be studied. The desire of sexual congress is as natural to

man as to all animals. Nature has thus provided for the continuance of the species. Although not really one of the passions of the mind, it is like all voluntary motion under mental control, and although a strong feeling of desire may involuntarily arise, from various causes of excitement, whether aided by a plethoric state of the system or not, yet it is in the power of a well-ordered mind, to control and regulate this as well as all other voluntary actions of the body. This is most important, because, at all times, the exercise of the sexual organs is exceedingly depressing, and the too frequent repetition of such act must exhaust the vital powers, and induce extreme debility, both mental and bodily. I say the too frequent, for here, as in all cases, it is impossible to lay down any definite rules. The constitution, the natural strength of the individual, and the surrounding circumstances, have, in each case, a varying influence ; but this is most clear, that although sexual congress, like the performance of all other natural functions, is healthful when duly called for,—the exciting thereto by any artificial means is in the highest degree to be deprecated. The discharge of the seminal fluid induces at all times languor and temporary debility. In early life, this is transient, and the action of coition may be often repeated under very slight excitement, but by so doing, the most important powers of the

system are fearfully jeopardised, the over-worked organs may be worn out, the procreative power be lost, and even premature old age induced.

As man advances in life, the urgent feeling of desire for connection with the other sex, unless viciously maintained by excitement, declines, and sexual congress is less frequently sought for, yet each action has a very depressing and debilitating effect; this is not unfrequently so great, as to endure several hours, or even pass into the next day. As age increases, these effects are more marked, and although many men continue to possess procreative powers until a very late period, there is no passion which so much requires the control of reason as the desire for sexual congress, and perhaps none which is more completely under the control of a well-regulated mind. To indulge in it moderately is to follow out the dictates of nature, and is useful by relieving a plethoric state of the organs of generation, which a vigorous state of health naturally induces in the early and middle period of life. To excite the organs to action when no such plethoric state exists, to stimulate them to uncalled-for exercise too early or too late in life, is to debilitate the whole frame seriously, and to make an injurious exertion of the powers of the constitution. Morality, as well as good sense, strongly inculcate the necessity of con-

trolling the animal desires. Great urgency is often caused by too frequent indulgence, and may be moderated by active bodily exertion, by serious mental labour, or even by the resolute exertion of the will determined to preserve the body from the exhausting effects of so debilitating a function.

Thus, then, by a well-regulated activity of mind and body, health may be preserved, and a mature and vigorous condition be greatly prolonged, yet as years roll on decay will gradually advance, at first almost imperceptible—the sure impress of the hand of time will be gradually marked in every feature and member of the external frame, in every organ of the intelligent mind. It behoves the individual to watch closely the steps by which old age comes on, to study his own constitutional idiosyncrasy with a view to find out the weakest points; and, as a good general would most carefully guard the weakest portal, or that by which the enemy might easiest enter a citadel, so should every man advanced in life avoid exciting those organs which he knows to be weakest, select those foods which experience has taught him his digestive organs can most easily assimilate, follow such pursuits as he has found to be least exhausting, and seek such relaxation as he has found most exhilarating and recruiting. All that has been said as to the promoting of vigorous

maturity by active exertion, is applicable to the middle period of life, from 30 to 60 years of age. After this, although the individual may feel himself still able and vigorous, although no marks of decay may be visible, and old age may seem yet afar off, it will be well to remember the certainty of its advent, and to prepare for its approach. The same general principles of conduct which should guide an individual at 40, are equally applicable at 60; but each rule of life must be modified by the change of powers, the altered capabilities of the individual will cause some alteration in conduct, and the wise man must from year to year mark the gradual progress of that decline, which few about him discover, and so conduct himself by suiting his pursuits and habits to change of circumstances, as not only greatly to prolong his life, but to make that life, even unto its latest period, a scene of rational enjoyment. Thus may a man of virtuous and enlightened mind, endowed with a healthful, well-formed frame, pass through many happy useful years, respected and beloved by his fellow men; until, at the close, the worn out body shall sink into nothingness, and the immortal soul shall rejoin its Creator, to give a good account of the performance of its mission here.

PART III.

ON THE DECLINE OF LIFE IN DISEASE.

INTRODUCTION.

I HAVE hitherto spoken of the Decline of Life in Health, and have endeavoured to show how the body may best be sustained under the inevitable effects of time. I have now to take a very different and less agreeable view of the latter years of life,—to regard them under the baneful influence of disease, to mark the way by which the enemy gains footing into the citadel and becomes master of the fortress, sometimes so gradually that it is very difficult to observe his approaches and withstand his efforts; sometimes more boldly by a *coup de main*, if any portal be left thoughtlessly unguarded. I shall, first, shortly consider that perceptible failing in constitutional power and general health, which often marks the accession of old age,

and which has been well named, climacteric ; secondly, explain the conduct which should be followed at that important period ; and, lastly, I shall inquire to what diseases old age is peculiarly liable, and, as each one passes under review, endeavour to point out the means by which its attacks may be averted, or when it does appear, its progress may be arrested, or its evils mitigated.

It is not my intention to describe, fully, the diseases of age, or to point out their medical treatment. All this has been done by abler pens than mine ; my object is neither to dispense with the physician nor with medicine. I wish to teach the aged invalid what he may well do for his own safety and comfort to avoid the attacks of disease, and when it does come to mitigate its evils and prevent its baneful consequences, and all this not to supersede but to aid those really curative means which the skill and ability of his physician can alone suggest. Self-medication is at all times a most silly practice ; but in age, when the constitutional processes, weakened by time, are least able to resist disease, its attacks can only be properly opposed by a combination of learning, skill, and experience. No man of common sense would attempt to repair a watch, however long he had been accustomed to wear one ; the human frame is, in

structure, a thousand times more complicated than a watch, and its actions (unlike those of that admirable machine) are not uniform but perpetually varying, yet how many men, wholly ignorant of its structure, and of the sources of its actions attempt to repair it. What must be the result?

CHAPTER I.

ON THE CLIMACTERIC PERIOD IN MEN.

SOME men glide so insensibly from one stage of life into another, that no line of demarcation can be perceived. It appears as one continuous journey, and nothing seems to point out the different stages; whilst in others the periods of life are more clearly marked and the changes more apparent.¹ The change from childhood to puberty is always shown by distinct phenomena, the youth soon ripens into the young man and gradually proceeds to attain complete maturity; after that condition has endured for some years there are often certain perceptible changes, oc-

¹ The ancients believed that very important changes took place in the economy at certain periods—the first being the seventh year, and the subsequent epochs commencing at the numbers resulting from the multiplication of five, seven, and nine into each other, as the twenty-fifth, forty-ninth, sixty-third, and eighty-first years. The last two were called grand climacterics, as the life of man was supposed to have reached its allotted term. This doctrine has been traced to Pythagoras, who derived it from the Egyptians. (*Copland's Dictionary*, p. 336.)

Dr. James Johnson, in his work ‘The Stream of Life,’ &c., divides life into periods of seven years each. I believe such arbitrary divisions completely fanciful; each phasis of life will come on at various periods in various individuals, and endure different lengths of time.

curring without any apparent cause. The period of the occurrence of these changes is various, but it is generally between the age of fifty and sixty-five years, that those derangements arise which have been called climacteric. Sir H. Halford says from fifty to seventy-five years of age, but surely changes occurring at the latter period can scarcely be called climacteric, or such as occur in passing from manhood into age. Without the occurrence of any manifest cause the individual becomes weak, is easily fatigued, sleeps badly and restlessly, and rises unrefreshed; the whole frame loses much of its vigour, the face becomes thinner, and the countenance assumes the appearance of anxiety and age. The tongue is furred, the skin hot, the bowels constipated, the urine natural and plentiful, yet the legs become œdematosus, the body emaciated, and the pulse slightly quickened. Headache, giddiness, general emaciation, want of appetite and indigestion, often supervene. All this may go on for some time until the latent seeds of some evil spring forth, and organic disease becomes manifest; or, after enduring a short time, all these symptoms may go off or yield readily to medical treatment, leaving the patient hale and hearty, free from disease, but his countenance evidently bearing the marks of change. The whole frame, although apparently still

vigorous and capable of exertion, has lost the plump freshness of maturity, and the presence of a healthy green old age is at once manifest. Happy are they in whom such result appears! Full often, even when no latent organic affection breaks forth, the vital powers do not appear capable of sufficient reaction, and after many attempts to re-establish the healthful balance, they gradually give way, the emaciation progresses, oedema increases, the appetite fails, indigestion is constant, a low feverish action continues, and the patients gradually sink into premature decay and death. All this occurs without any evident origin; often some slight cause is named, a trifling fall, a slight excess or over-exertion, such as would at first seem to be wholly inadequate to induce such disorder; but this is not so, in truth, the general disorder was approaching, but unobserved, the limits between health and disease had been nearly attained, and it required but the slightest cause to disturb the balance. Of all causes inducing this condition, those which spring from the mind are the most common and certain in their effects; anxiety, over-exertion, watchfulness, are certainly the most common causes of climacteric disease, and hence this disease is much more common in those whose daily labours are more mental than physical, and more common in men

than women. It is amongst the very heavy taxes which are paid by intellectual superiority, and hence, perhaps, it arises that it has not been much noticed until in late years ; the best account we have of it is from the pen of Sir H. Halford, who lived and practised amongst those whose energy and activity of mind but too often destroyed their bodily frames, the restless sword destroying its own scabbard. I have often doubted indeed whether this state of general debility, and failure of all the bodily functions without any organic cause, ever does arise, except from exhausting mental labour, or long-continued mental anxiety : it is certainly possible that physical exertion carried to undue excess might induce it, but this, I feel convinced, is very rarely the case, except perhaps from an undue indulgence in venereal pleasures, and, hence, ill-assorted marriages, late in life, often lead to climacteric decay. It is perhaps most frequently in the robust and vigorous that this disorder occurs ; men whose corporeal structure seems perfect and fitted to endure for a great length of time, whose mental qualifications are of the highest order, and who do not bear about them any hereditary taint or proneness to disease. To such model men (if I may use such a phrase) all things seem possible, they despise slothfulness and ease, and enjoy the active exertion of their

powers and faculties, hence they overtax both ; they go on labouring as usual, either without noticing or wholly disregarding the slow and insidious progress of decay. No organ or function has given way, no marked disease has sprung up, as would have occurred with less favoured mortals, their organisation is so perfect and well balanced, that no part, weaker than the rest, yields, but the whole becomes debilitated and deranged. There is no attack of gout or apoplexy, no paralytic seizure, no sudden haemorrhage, no cancerous development, but all the organs of the frame become weaker, all their functions are more feebly performed, and this admirably formed and highly endowed individual falls into a gradual decay and sinks into a premature grave, the victim of self disregard and of the want of caution in the preservation of those endowments and capabilities, which great as they really were, he rated still more highly.

But from whatever cause it may arise, climacteric derangement is greatly to be feared, because it so weakens the conservative powers of the constitution, as to lay it open to all the evils which may be watching to attack it, and especially enables the latent seeds of hereditary diseases to develop themselves. It is the duty, then, of all persons who have attained the climacteric age, carefully to avoid

excesses and undue exertions ; to watch at all times for the insidious approach of disorder ; never to neglect any slight ailments, but, regarding them as the fore-runners of more serious derangements, seek to repair the most trifling irregularity of function, and give rest, at once, to any organ of the body which shows signs of debility or fatigue. All this more especially refers to those who are conscious of some hereditary or constitutional tendency to disease. It is at this period of life that it is peculiarly the duty of an individual to examine somewhat into his own condition, and to inquire,—

- 1st. Have I any hereditary tendency to disease ; and,
- 2d. From disease, irregularity, excess, accident, or any other cause, is there any one organ of my body which I deem weaker than the rest, or any function of the animal economy which appears to me to be more feebly performed than is natural ? There are few persons of 50 or 60 years of age, who are not conscious of some difference in the vigour of the various organs and functions of the body, which has either existed from their youth upwards, or which has arisen at some after-period of life. Many are aware that some hereditary tendency to disease must exist in their constitution, although no symptom of such disease or indication of such tendency has ever appeared.

Physicians who are well acquainted with their patients can generally name the weakest point of the Fortress of Life, either from their knowledge of the past life and family history of the individual, or can discover it, even without such aid, by a careful examination, conducted with that object in view. Forewarned is forearmed ; and it behoves every one then to institute such self-examination—to find out which are the weakest points in his organisation, that, by the aid of his own good sense, or by the advice of others, he may best protect himself from the accession of disease.

CHAPTER II.

CLIMACTERIC PERIOD IN WOMEN.

It has been observed in the last chapter, that, although climacteric changes do not universally occur in man, yet that decay at that period of life is more common than it is in women. There is this marked distinction between the two sexes: that, whereas there is not of necessity any climacteric change in man, all such must be regarded as disease, whilst in women the phenomena of the climacteric period are of universal occurrence, and are natural and healthful. It is only when abnormal that they are to be regarded as disease; and hence this period is familiarly and properly named amongst women the change of life.

The most prominent phenomenon of this period is the cessation of the catamenial discharge; but it is accompanied by various others dependent thereon. At some period usually between 45 and 55 years of age, the monthly catamenial discharge ceases to appear, but not according to any fixed law, nor in any uniform manner. Sometimes it suddenly ceases to flow, and never again reappears. Sometimes it varies

in the periodic return, recurring every six weeks, or, after a cessation of two, three, or six months, appearing for a few times irregularly, and then never again recurring. This state may continue for two or three years, or even longer. Sometimes the discharge diminishes gradually in quantity, and changes in colour. Often the quantity is so much increased, as to constitute a serious loss of blood, and induce great debility ; and this more frequently occurs when two or three or more periods have been passed over, as though its non-appearance had given rise to a plethora, which thus suddenly not only relieves itself, but goes often so far as to leave the female pale, exsanguine, and exhausted ; and this in many women will occur again and again, without being dependent on or attended by any organic disease.

It is clear, then, that this is really one of the most important periods of female life, demanding a watchful care on the part of the individual, and often the greatest ability on the part of the physician. The constitutional powers may be undermined by repeated and exhausting discharges, and a true state of climacteric cachexy be induced. But it is especially at this period that many latent diseases are most prone to appear, whether of hereditary origin or not ; and it is equally certain that if the female pass

through this period free from debility and disease, she has probably before her a long vista of years, during which she is fitted for the enjoyment of vigorous health, and may anticipate attaining a good old age. The most normal manner in which the catamenia cease to appear is a gradual change, the periods becoming prolonged indefinitely,—five or six weeks, one, two, three, or more months may elapse,—the discharge becoming at each time less and less, until it ceases altogether. During the period that this change is going on, marks of plethora and excitement are very common, especially in strong healthy women, and those who will most likely, with proper attention, go well through the trial, and become strong and healthful afterwards. It often seems as if the female constitution resists as much and as long as possible the attacks of time, and passes unwillingly into that period of life in which the procreative powers no longer exist. The catamenia often seem to strive to reappear: a slight discharge, but no more, takes place again and again. The natural flow of blood being then somewhat changed, there is irregular plethoric sensations in various parts; sudden feelings of heat and flushing are very common, and may be excited by slight exertion. Headaches and sensation of fulness in the head, especially in the back

of the head, are frequently felt. A watchful care should be kept, lest a real plethoric state supervene. A most careful regulation of the bowels is indispensable, as they are the great safety valve, and should be used as such without fear. Exercise in the open air, abstinence from fermented liquors of all kinds, and moderation in diet, are necessary at this period; and it may be needful, sometimes, to have recourse to medical treatment: the application of leeches, or the use of diaphoretics, and of drastic and saline purgatives, so as to unload the hepatic vessels, or produce a serous discharge from the surface of the intestines, may be highly useful. But these means should not be adopted without proper authority, for it is easy to pass the boundary line, and induce debility. On the other hand, if the cessation of the catamenia be abnormal, it will be in one of two ways; either they will too suddenly cease to appear, or they will linger too long, recurring too frequently, or copiously, or both. In the first instance—the too sudden or rapid disappearance of the catamenia,—the dangers to be apprehended are simply of a plethoric character, and demand merely the vigilant observation and care of the physician; but the second case is more difficult to manage. On the one hand, the too frequent or the violent discharges often induce very great

debility, paleness, and exhaustion, leaving no time for recovering the loss of blood, and recruiting the general powers. Yet occasionally these outbursts are preceded by such symptoms of plethora as might tempt the unwary into dangerous interference. I speak of this condition as purely a functional derangement,—not connected with any diseased condition of the uterus; for it is manifest that if any such diseased condition exist, it demands the attention of the physician, and therefore whenever the suspicion of such disease does exist, the question should be at once determined by examination. When, however, we have simply to deal with a discharge of blood, copious and continuous, or frequently recurring, we should have recourse to all proper means to diminish and arrest the flow. It is a prevailing and dangerous error to leave everything to nature, merely to remain at rest and wait the gradual cessation of the flow. It often becomes merely a passive haemorrhage, and demands a skilful and careful treatment to mitigate the discharge and remove its debilitating effects. It is a sad thing to see females at this period of life thin, pale, exsanguine, walking about the mere shadows of their former selves, and every now and then confined to their beds for a week or more, from which they are at first scarcely able to rise; and to know

that they are suffering all this, and perhaps laying the foundation for serious disease, from a mistaken notion,—“that it is best not to interfere, that nature should be allowed to take her course.” I do not know of a greater evil than this, nor one of more frequent occurrence. When nature has dealt kindly with a female, and the catamenia have disappeared without any important derangement of health, she then enters on a new phasis of existence; her constitution gradually approaches to the type of the male in the manner described in Part I, (page 41.) Yet in many women, although the catamenia never reappear, there will often occur, at indefinite periods, even for several years, various signs of fulness and plethoric feelings in the head and loins, and flushings in the face and chest, which demand the use of salines, purgatives, and perhaps some trifling abstraction of blood by cupping or leeches; and this, particularly in the most strong and healthful women, will occur again and again, until the period when age decidedly sets in. The period of the “Change of Life” should not be made to signify the period of the disappearance of the catamenia only, but should mean the whole time from the first irregularity in the flow to the cessation of all plethoric feelings, in a word, to the unmistakeable commencement of age; and during the

whole of this period, the woman should carefully watch her own condition—bearing in mind, that various organic diseases are then most likely to commence, that the latent seeds of hereditary evil are the most likely to become developed, and altogether, that she is passing along a way beset with dangers; but that prudence and watchfulness will assuredly guide her safely through the road.

CHAPTER III.

DISEASES OF AGE.

IN every period of life, the due performance of all the functions of the frame constitutes health, and any failure or derangement in their action constitutes disease. If there be no change in the structure or organisation of any part, the disease is merely functional, and the healthful action being restored, all is well again; but if there be any positive structural change in any part of the body, the disease is of a more serious and intractable character,—it is then organic, and it is rarely that such organic changes can be removed or the disease be absolutely cured.¹ When organic changes in any part have occurred, the utmost care of the individual, the utmost skill of the physician, is generally confined to an endeavour to

¹ Perhaps, there cannot really be any functional change, but as the result of some organic change, although such change may not be evident. Future observers, aided by the powers of the microscope, may teach us what slight changes of structure occasion those derangements which we usually call—functional; but it will be readily understood that by the term—organic changes, as here used, visible changes of structure are intended.

arrest such changes, to prevent their progressing, and confessing his inability to remove the existing disease, to arrest its course at the point to which it may have attained. Perhaps, the period of age is not really more prone to disease than youth or maturity ; but, unquestionably, it is less capable of resisting its baleful influence, of combating its development and progress, and of restoring the part attacked, or the general system to a tone of healthful activity. It is hence, probably, that some diseases have been considered most likely to occur in age, because age is less capable of resisting their attacks. It matters, however, but little, if this view of the case be precisely correct or not ; it is at all events manifest that a most watchful guard should be kept against the approach of those evils chiefly to be apprehended, so that they may be met at the very threshold, and not be permitted to gain admittance ; this is most particularly the case with regard to those affections which appear to pass as hereditary possessions in certain families, as Gout, Insanity, Asthma, Cancer, Apoplexy, Consumption, &c.

It should be remembered that disease is never really hereditary ; all that can be so called is a predisposition or liability to be affected by certain diseases, such a peculiarity of frame or constitution

as shall make the individual less capable than others of resisting the attacks of this or that disease, if any exciting cause should induce its approach. No one is born with gout, consumption, or insanity—secreted as it were in some obscure corner of the organisation, and destined inevitably to burst its prison-house at some subsequent period, and diffuse itself through the system. But many are born with such peculiarity of the whole organisation, as renders them less capable than others of resisting the attacks of certain diseases, and this predisposition to receive them is very often inherited directly, from the parent or ancestor. It may not always appear to be directly from either parent that such peculiarity is derived, but it may be traced to the second generation upwards, or perhaps further. These fearful liabilities, like peculiarities in feature, form, and character, seem to pass on in families, and are not destroyed by the immunity of one generation; thus, a person may be very subject to attacks of gout, or prone to consumption or insanity, whose parents were never affected by those diseases; but whose grand-parent, or uncle, or aunt may have been so affected. Dr. Pritchard in his learned work on '*The Physical History of Man*,' endeavours to establish one general law as to transmission of disease, viz.—That all original or connate

bodily peculiarities tend to become hereditary, whilst changes in the organic structure of any individual from external causes occurring during life commonly end with him, and have no obvious influence on his progeny ; but if this be taken as a general law, it is difficult to understand how any disease could ever have become hereditary, for all peculiarities must have been, at some time, acquired. The difficulty here is the same as that regarding certain diseases, as measles, scarlatina, &c. &c., being invariably considered as the result of contagion. The first case must have been sporadic. The first peculiarity of organisation or constitution must have been acquired.

Even as children will resemble one parent in form and feature more than the other, so has it been well observed that the constitutional tendency to disease appears to follow the line of the parent more nearly resembled : thus, of several children of a gouty father, that one who most resembles him will in all probability be most liable to attacks of gout. Sir H. Holland has given many curious instances of transmission of disease which he has noted ; the most remarkable perhaps being that of hydrocele, occurring in three out of four generations successively, the break in succession having arisen from the individual being a female, whose son had the disease. This elegant

writer quotes Boerhaave, to show that not only are many diseases hereditary, but that they evolve themselves at particular periods of life. "Novi in hac urbe familiam, in quâ omnes certâ aetate schirrum accipiunt, et hoc malum ab ovo parenti liberis est communicatum; uti et familiam ubi omnes certâ aetate icterum accipiunt, et sic orto postea hydrope moriuntur. Novi etiam aliam familiam ubi omnes primo satis faceti, sed certâ aetate in melancholium incident." (Boerhaave, *Prax. Sect.*, 485.) "When the disease," says Sir H. Holland, (*Med. Notes and Ob.*, p. 41,) "depends on anormal conformation of some organ, it may be brought into active shape, either by the accumulated effect of exciting causes long continued, or by the operation of new causes, coming into operation at certain periods of life. . . . We may affirm then," says the same author (p. 29), "that no organ or texture of the body is exempt from the chance of being the subject of hereditary disease. Or, in other words, every part is susceptible of deviations from the normal type or natural structure, capable of being conveyed to offspring, and of producing morbid actions, which are thus, under the name of disease, frequently propagated through successive generations. Of the instances given, to which others might have been added, it will be remarked that they are all perfectly congruous with

the common transmission from parent to offspring of the external features of the body, in the peculiarities of which no diseased action is involved. The wonder and difficulty are alike of the two cases.” This view of the subject, illustrated as it is by the quotation from Boerhaave, by many other cases, and also by the undeniable fact, that it is only at certain advanced periods of life that many hereditary diseases appear, would imply that it is not a liability or tendency to disease which is hereditary; but that the seeds of the disease itself (*morbus ipsissimus*) are actually transmitted, that they lurk in the organisation *ab origine*, and become developed with the progress of time, even as one of our poets declares:

“As man, perhaps, the moment of his breath,
Receives the lurking principle of death;
The young disease, that must subdue at length,
Grows with his growth, and strengthens with his strength;
So, cast and mingled with his very frame.”

The features and the frame of the body have from the first definite forms, which are afterwards developed; but if any original abnormal organisation of any part in the like manner exist, it is impossible to conceive that any disease which such abnormal conformation would induce could lie dormant for many years, such abnormal organisation existing throughout that period;

or if disease consist in the abnormal performance of any function, we cannot understand why, at one particular period of life, such abnormal action should commence, the organs being in the same condition as heretofore. But we may well understand how any one or more organs of the body may from the first, although normally constructed, be weaker than the rest, and therefore more liable to fall into a diseased condition on the occurrence of any exciting cause, either extraneous to the body, or from the over-exertion or misuse of these organs themselves, or of others. A state of debility then which renders peculiar organs, as the mammae, the lungs, the kidneys, &c., prone to take on diseased action may be original and transmitted, and give rise to cancer, consumption, or calculus, at the period of life when exciting causes may occur, and this does not render it needful to suppose such diseases to have been actually transmitted *ab ovo*, and to have been lying concealed in the system from birth, inevitably destined to appear after a certain lapse of time.

The best mode of eradicating such family taints is by intermarriages with purer breeds, in which no such constitutional tendencies exist; and consequently, the continuous marriages within a confined circle tend most powerfully to perpetuate and increase those evils,

even, as farmers well know, that the breeding in and in will not only perpetuate the peculiarities of all races of animals, but also increase any evils to which the race may be obnoxious, and deteriorate greatly its general vigour and excellence. The best mode of improving the breed of animals is undoubtedly to cross it with others having different peculiarities, possessing in an eminent degree the qualifications which are required, and being free from those evils, the taint of which it is desired to obliterate. Let men then apply the same reasoning to themselves. Let them be but as careful to secure health and vigour in their own offspring, as in those of the animals under their care, and they will assuredly succeed as well. Let them break through the bondage of rank, family and condition, and by the judicious union of constitutions differing from each other, gradually eradicate all hereditary tendency to painful disease and premature decay.

This subject of counteracting or eradicating constitutional tendencies to disease deserves to be much studied by the physician and philanthropist. Judicious intermarriages may and certainly will gradually change the constitutional tendencies and amend the evils of any particular race; but this is a slow process, requiring perhaps several generations and continual

care, yet the very important question remains, how to amend the constitution of the individual. If a child be born of parents, one or both of whom are of a constitution predisposed to consumption, gout, or insanity, is there any mode of training by which this infant may be saved from the painful doom which seems, like the sword of Damocles, always hanging over it, ready, by the slightest moving cause, to be cast down on its victim? Much, I believe, may be done to alter the constitutional tendencies of the young being by a careful training, begun early in life, keeping constantly in view the object to be attained. I cannot here enter fully into this part of the subject,—it belongs rather to a work on the period of development than on the period of decline; but I cannot avoid referring to one prophylactic means, which seems to me highly important, and well worthy the consideration of parents and their advisers. Whenever any disease is known to have long existed in a family, and a tendency to which is therefore fairly presumable to be a part of the birthright of a newly-born infant, it is desirable that such infant should not be nursed or brought up by the parents, but that it should be confided to the care of and nourished from the breast of a well-chosen healthful female, alien to the family, and apparently of a constitution opposite to that of the parent: without

considering too deeply the difficult question of hereditary transmission of disease or of tendency to disease only, it may well be argued that if the infant organisation be affected by some hidden evil, the pabulum vitæ, by means of which that infant organisation is to be developed into maturity, should be derived from some other and purer source, with the hope that thus, by healthier additions, the original faulty conformation may be neutralised or overborne, and a constitutional condition result which may partake of the healthful means of development after birth, as much, or perhaps more, than of the faulty characteristics acquired whilst yet *in utero*.

Let the old man, then, whilst yet in robust health, carefully examine and inquire if he be, from personal peculiarity of constitution, or hereditary taint, peculiarly liable to any particular disease, and if so, adopt such a course of living as may prevent its occurrence. If any disease do appear, or if signs of its approach become manifest, let him lose no time in using all the means which science may direct or skill apply for prevention or for cure. Let the enemy be driven from the door, for if once he be admitted, it may be impossible by any means to dislodge him altogether, and we may be well content to limit the extent of the mischief.

CHAPTER IV.

ON GOUT.

I shall now enumerate the principal diseases which occur after the meridian of life, as well as those peculiar to old age ; and, as each one passes in review, offer some hints which may, I trust, be found useful to the afflicted.

Gout is a plethoric disease arising from indigestion, in some peculiar constitutions only ; which peculiarity of constitution appears to be hereditary, for in others the same irregularities of diet, &c., will be followed by very different results. It appears to be essentially a disease of acidity ; acid eructations are constant, lithic acid or lithates are found in the blood and in the urine. Indigestion is the constant forerunner or attendant of the attack : certain foods, and more especially certain wines, almost surely induce it, and a sedentary habit and plethoric condition most highly predispose thereto. Irregularity of the circulation is another most exciting cause, whether the circulation be accelerated by excitement or depressed by anxiety, or the insensible perspiration checked by

cold or by any other cause ; in a word, whatever deranges the balance of the constitution tends to induce the disease. Yet by careful attention, many persons of decidedly gouty constitution and descended from ancestors who had been great sufferers from gout, have passed through long and healthful lives, free from its attacks. A popular opinion has long existed that attacks of gout are often salutary, and nothing is more common than to hear a person say, " I have been long unwell, I have many things to complain of, but it is the gout flying about me ; oh ! I wish I could have a good smart fit of it, I am sure it would do me good." Few opinions can be more dangerous than this, for although erroneous yet, like most popular errors, there is some little truth at the bottom of it,—a single grain of corn in a bushel of chaff. The truth is, there is probably lithic acid in the blood, dyspepsia, flying pains in various parts exist ; there is a general feeling of malaise, a strong sense of impending evil : the gout is mustering its forces for the attack ; as yet they are not sufficiently powerful, but those derangements increase, until at length the foot or the hand becomes swollen ; the wished-for gout has come, and many of the previous symptoms have disappeared ; the forces of the invading enemy, concentrated in the toe, have left the various outposts free, and the silly sufferer congratulates himself in the

accession of a formidable disease ; saying—“ Yes, I have got my gout, and all those horrid feelings are gone—the gout has cured them all.”

“ So when small humours gather to a gout,
The Doctor fancies he has driven them out.”

But it surely does not require a knowledge of medicine to interpret all this ; surely plain common sense, unwarped by ancient prejudice, might teach the sufferer that all he had endured was but the accumulating symptoms of the coming ill, distinct marks of an approaching attack of gout ; and that had these symptoms been attacked by proper remedial means they might have been removed easily, one by one, before their concentrated power produced a most formidable disease. To wait for this concentration of symptoms, for this development of the attack of gout, appears to me to be much the same as if, in warfare, a commander were to watch various small columns of the enemy’s troops approaching from different parts, injuring the country and destroying the inhabitants, and in place of attacking each column, in detail, the moment of its appearance on its road of march, he were patiently to see them gradually approach each other and unite into a formidable army ; exclaiming continually, I wish this army would be formed, for then the country all around would be freed from the evils of its several

columns. The lithic acid contained in the blood appears to be the cause of all those distressing sensations which precede an attack of gout: nature, ever watchful to restore the healthful condition of the body, endeavours to get rid of this acid by one of two means, either by the kidneys, and the red deposits in the urine are the evidences of her success,—or by the admixture of this same acid with soda, and lithate of soda is then deposited in the smaller joints, under the improper name of chalkstones; and thus is the fit of gout terminated, being in fact not so much a disease as the mode adopted by nature in such constitutions to expel from the system a peculiar *materies morbi*, which the ignorance or indolence of the patient and the want of early medical aid had improperly allowed to accumulate.

Originating in the same erroneous opinion and equally injurious to the sufferer, is the long prevailing idea that a fit of gout should not be meddled with, that it should be allowed to run its course, that it will do good, &c. Various opinions may indeed exist as to the propriety of endeavouring to cut short an attack of gout, of causing a sudden retrocession of the disease from the part affected, say hand or foot, when it might probably appear again in some other and more dangerous locality; but no more

doubt can exist of the propriety of curing gout than of curing any other disease, if by curing be meant the expelling the gouty poison from the constitution, and thus restoring the organs of the body to their normal condition and to the due exercise of their functions. Great care is required in regulating the diet of persons having gout or a disposition to it, for, whereas it is clear on the one hand that the disease arises from an excess of lithic acid, and may therefore be fairly traceable to an excess of nitrogen in the food, and that it would be advisable therefore to reduce the quantity of food containing nitrogen, and partially, indeed mainly, to depend on a vegetable or farinaceous diet ; yet when the age and state of health of the gouty individual be considered, it may be very unwise to abstain from a nutritious diet altogether ; but the young and robust, conscious of hereditary tendency to gout, may very long keep free from the disease, or escape it altogether, by adhering strictly to a non-stimulant diet, composed chiefly of vegetables. I say nothing of the means of curing the gout, my object here is to explain the best mode of preventing its accession : the two following rules should be observed ; 1st, Let the diet be rather vegetable than animal, avoid as much as possible whatever may accelerate the circulation, as stimulating foods and drinks, exciting passions, severe mental

labour,¹ and violent exercises ; yet, in doing this, have a due regard to the age, habits, and natural powers, so as to sustain the body in due health and strength, lest we fall into the opposite extreme, and by avoiding too much strength, induce debility. 2dly, As soon as the symptoms threatening the approach of gout show that there is lithic acid in the blood, have recourse to such remedies and conduct as shall avert its ill effects, and cast it out of the body, before the dreaded (or perhaps wished-for) fit of gout shall occur.

The direct effect of stimulating food and drinks in inducing attacks of gout, is clearly evidenced by the fact, that it is generally a disease of the rich, the luxurious, and the sedentary. Animal foods, and all such as are rich in nitrogen, tend most to the formation of urea, and hence to induce excess of it in the blood ; and as powerful muscular exertion causes it to be thrown off by the urine in a remarkable manner, so inactivity promotes its accumulation.² Another effect of

¹ Sydenham considered that one of the most severe fits of gout he ever experienced arose from great mental labour in composing his treatise on that disease.

² In some experiments made recently on the influence of various causes on the condition of the urine, Dr. Lehman found that by the substitution of violent for moderate exercise, the quantity of urea was raised from $32\frac{1}{2}$ to $45\frac{1}{2}$ parts; and Simon found that after two hours' violent exercise the quantity of urea in the urine, passed half an hour subsequently, was double that which had been contained in the morning urine.

the abundant use of animal food, and also of stimulating drinks, is to accelerate the circulation and induce plethora, which should equally be avoided. Gout more frequently attacks men than women; indeed, it is almost a disease of the male sex. Dr. Gregory says that gout attacks fifty men in England for one woman, and that in Scotland the proportions are a hundred to one; and he attributes this entirely to the grosser feeding and more intemperate habits of the men. But the same distinguished physician gave, in his own person and example, the most valuable lesson as to the best means of avoiding attacks of gout, and combating the disposition to that disease. Born of a gouty family, and having been attacked by the disease early in life, he nevertheless, by a careful attention to diet and regimen, remained free from any subsequent attacks, and yet preserved his health, strength, and general appearance.

There seems good reason to believe that the immoderate use of wine and beer tends to the production of gout in a greater degree than the use of spirituous liquors; and this probably arises from the directly stimulant effects of the latter on the kidneys, causing them to carry off a larger portion of lithic acid: certainly gout is not common amongst the intemperate rabble of large towns; Dr. Budd states that many labourers on the Thames are annually admitted into the Dread-

nought hospital ship affected with the disease ; and it is well known that those men drink very largely (often two or three gallons daily) of malt liquor. That it chiefly affects the wine-drinking classes has always been remarked ; Dr. Watson well observes that the servants of wealthy families are often so affected, especially butlers, coachmen, porters, &c., yet they are rather a beer-drinking than a wine-drinking class, although they frequently feed as luxuriously and often live as lazily as their masters. Perhaps here, as on a former occasion, I may point to the marked distinction between the effects of those liquids which are the products of fermentation, and of such as are educed from them by the further process of distillation. Fermented liquors, properly so-called, that is, beers and wines, moderately and judiciously used, may sustain the strength and contribute to health ; over-indulgence in them may induce indigestion, plethora, and all the evils in their train, gout amongst the rest ; but ardent spirits, used habitually as drinks, are at all times hurtful, and if taken frequently in excess induce diseases of a much more serious character ; not functional derangements, but changes of structure and often the total disorganisation of parts.

CHAPTER V.

CANCER.

CANCER is not a disease peculiar to age, yet it is chiefly, perhaps, at the climacteric period of life that it appears. It may perhaps not be, strictly speaking, an hereditary disease, yet it often occurs in different members of the same family. Perhaps it may sometimes be a purely local affection, as when induced by some local cause, as a blow on the female breast, the pressure of a prominent tooth against the tongue, &c. ; yet it is most frequently a constitutional affection. a disease of the blood, and although appearing at first in one place only, becoming afterwards developed in others.

Women are much more liable than men to be attacked by this formidable evil; and as we are at present wholly unacquainted with any mode of cure, it is most highly important to prevent its appearance, or arrest its progress. Not only is it chiefly about the period of the change of life that cancer appears in women, but it is usually also in some part peculiar to the sex—as the breast or the uterus, and it is therefore highly probable that a local plethora of those parts

is often the really exciting cause of the disease. The usual monthly discharge of blood having ceased to appear, the ordinary safety-valve having ceased to act, yet the woman being strong and healthy, local plethoras are likely to occur; and when they attack organs which have fallen into desuetude, effusion and consequently induration of parts result, and these indurations, although often unimportant, quickly become malignant when any faulty constitutional predisposition exists.

The individual may do much to prevent the accession of this dreadful disease. It may be caused by a general plethoric condition; it is directly induced by a too great local fulness: let her therefore carefully keep watch for these causes, and prevent or remove them. Let her, by diet, by regimen, by evacuants, avoid great plethora—it is the parent of a thousand evils, and especially to women at the critical period of life. Even so, as to local fulnesses; if they occur let there be no delay—no neglect of remedial measures; but let means be taken at once to remove the superabundant quantity of blood and to diminish the increased impetus, before any evil effect is induced—before any effusion of lymph shall have taken place; afterwards it may be too late, it may be impossible to remove induration, it may be impossible

to prevent the accession of disease. When parts have become thickened and hardened, it may be a very grave question, if any attempt should be made to soften them, if it be a case of simple induration; or to remove them if it be malignant. A simply indurated condition of a part, especially if that part be not called on to perform any function, is a trifling evil, and experience has shown that such induration may continue for many years unchanged and harmless, and any attempt to remove it may excite a diseased action, which we may not have the power to allay; on the other hand, if the hardness be really malignant, it may also be progressive and pass by the absorbent vessels from one part to another, and thus contaminate the whole body, and the favorable moment may be lost, when, by removing the local evil, we might have prevented the general disease. This is often a question of the greatest difficulty, and can only be decided by the most careful investigation and most accurate judgment, guided by an enlarged experience.

Cancer may attack any organ or structure. In the female it most frequently occurs in the uterus and mammae; but in both sexes it commonly occurs in the tongue, stomach, and rectum. In the first situation it often results from the pressure of a tooth, the early removal of which or the filing of it down might have prevented

the development of serious disease. In a broken or decayed tooth small spicula of bone will often project, which might in an instant be nipped off and the surface be made smooth by a file, but which, if suffered to remain, keeps up a constant irritation against one spot in the tongue, and causes inflammation, thickening, and ulceration ; which, whether it become malignant or not, is wholly incurable, until the exciting cause shall have been removed, and which often, even then, is very difficult of cure.

The attack of this dreadful disease on either end of the digestive apparatus, is often the result of the misuse of those parts. The coats of the stomach have been, perhaps, too much excited by highly seasoned foods, too much irritated by spirituous liquids, or there has been habitual constipation, and the rectum has been irritated, and its circulation deranged by the pressure of hardened fæces. Cancerous affections of these parts, however induced, are incurable, yet much may be done to mitigate their evils and retard their progress. The one great object is to avoid all irritation, and as the use of the parts diseased are essential to life, it is desirable to make that use as mild and unirritating as possible ; this may be done by careful regulation and great simplicity of diet, by extreme cleanliness, and the frequent use of enemata to keep the rectum clear of

all feculent matter, and induce the evacuation of its contents with but little effort. Medicine, too, may do much to sustain without exciting the constitutional powers; and it appears to me probable that in many cases great relief might be obtained by forming an artificial exit to the intestinal canal in the groin or in the loins, as is sometimes done from necessity in the operation for hernia, and has been successfully performed by Mr. Luke and others, in cases of stricture in the rectum. It is manifest that in such cases the rectum being entirely unused, and irritation being thus avoided, the disease in that gut might cease to be progressive.

CHAPTER VI.

DISEASES OF THE DIGESTIVE ORGANS.

DYSPEPSIA has often been enumerated amongst the diseases of age ; but it is by no means peculiarly so. Indeed, there is but one reason why old persons might be more frequently afflicted with indigestion than others, viz., the loss of teeth, which, preventing proper mastication of the food, and its due admixture with saliva, causes it to be submitted to the action of the stomach in an unfavorable condition. This should be carefully borne in mind in the selection and preparation of food. All kinds of food, especially vegetables, should be carefully prepared, so as to be very easily broken down by the remaining teeth, or even by the toothless gums. The skill of the dentist in supplying artificial teeth in place of any that may have been lost, is not only important as preserving uniformity and beauty, but also often prevents the occurrence of diseases of the digestive organs, as many persons can masticate with them exceedingly well. Generally speaking, the stomach-diseases of the aged are the results of their own imprudent conduct. The sense of taste

survives most of the others, and hence the aged, deprived of many pleasures, cling to the enjoyments of the table, and pursue them to excess ; although the delicacy of flavour is often lost, yet the organs remain sensible of the pungency of various foods and drinks, and hence the strongest liquids, and the most highly seasoned foods are preferred and sought for, and to this great error in the selection of diet, an indulgence in quantity is too often joined ; thus, then, the stomach is distended by irritating foods ; much of these pass into the intestines but imperfectly digested, and collections in the bowels, especially in the larger intestines, are the consequence, then follow heartburn, flatulence, and either constipation or diarrhœa. If nature strives to throw off the load thus unfairly thrust into the bowels, increased action of the blood-vessels is induced, a state of irritation of the mucous membrane results, causing either debilitating discharges of fluid from its surface, or a low sub-inflammatory condition leading on to disease. If the mass continue for a time to distend the bowels, and by its weight and pressure to impede the circulation, hemorrhoidal swellings are the consequence ; and often when these burst, large quantities of blood are lost, producing great and sudden debility, but affording no real relief to the patient whilst the free passage of the gut continues to be

impeded, and, if these causes continue in action, obstruction in the hepatic circulation, and hence diseases in the liver, often occur; so also, if the rectum be often, or for a long time over-distended, abscess near the anus and fistula commonly result, and this burrowing along the coats of the gut may induce hectic fever and death, or be remediable only by a severe surgical operation. Yet these evils are not the necessary consequences of age, but commonly occur at that period of life merely from indulgences in gluttonous and sedentary habits, from the want of the ordinary watchfulness, and the early employment of such means as would have prevented their occurrence, or have remedied their effects.

CHAPTER VII.

DISEASES OF THE URINARY ORGANS.

THE urinary organs are certainly prone to become diseased in age. The prostate gland is always enlarged, and, the bladder having become weaker, retention, or incontinence of urine, often occur.

DISEASE OF THE PROSTATE GLAND.

As age advances, at about 50 to 60 years the prostate gland always becomes enlarged, and this chiefly at its middle lobe. The enlargement may be simple, and may not proceed so far as materially to inconvenience the individual, or, in fact, to constitute disease; or it may become abnormally enlarged and indurated, projecting into the bladder, or pressing on the membranous part of the urethra, so as partially or entirely to obstruct the flow of urine. Often when by an effort the urine can be made to flow, the bladder is not emptied, for a sac, which the individual is never able to evacuate, has formed behind the prostate; in this sac a small quantity of urine always remains, and mixed with any mucus which may gravitate

to that part, it soon becomes foul and fetid, irritating the inner coat of the bladder, and inducing disease. Whenever then, from enlargement of the prostate, or from any other cause, there is reason to believe that the urine is not fully evacuated by the natural powers, it is highly important that the catheter should be used, so that once in 24 hours at least, the bladder should be fully emptied of its contents. This is a point that requires much watchfulness, for when no difficulty in micturition exists, the bladder being partially emptied with ease, all painful feeling is removed, and it may not be readily suspected that a small portion of urine is always left in the most dependent portion of that organ, and that, being there mixed with mucus, as in some stagnant pool, it soon becomes putrid and baneful. This state of things may be suspected if the bladder feels often much distended, and there is consequently great desire to pass water, yet the quantity cast off be small. In such cases, the last particles are passed with some straining, and contain a slimy matter, or are followed by some thickropy mucus. The distension of the bladder and the consequent desire to micturate, returns, too, earlier than could have been fairly anticipated. When these symptoms occur, a large catheter should be passed into the bladder immediately after that viscus has

been emptied, as much as possible, by the natural powers, and often, by that means, a few ounces of thick, foul urine, mixed with mucus, will be drawn off. If this occur, the nature of the case is evident, and the catheter should be employed once in every day to prevent the formation of disease.

In the same manner as the middle lobe of the prostate presses on the urethra, obstructing its canal, so does the body of that gland often project backwards against the rectum, materially impeding its due action, forming a sort of shelf, against which the faeces rest, and thus inducing or increasing constipation, and all the evils which follow in its train. Whenever, then, from the weight felt in the rectum, and the straining required to empty that gut, this condition may be suspected, an examination with the finger will readily detect the fact, and when once known, it is indeed the fault of the individual himself if any evil result; for either by the use of simple enemata, or by mild aperient medicines, the accumulation of hardened faeces in the rectum may be easily avoided.

The simple enlargement of the prostate gland in this manner is so frequent a concomitant of age, as scarcely to be considered a disease, yet it is often the cause of much suffering, and gives rise to much disease, which might generally be prevented by

reflecting on the nature of the evil, and understanding the simple and easy means of remedying it. A hard substance (the prostate gland) is placed between the two grand outlets of the body, closely embracing the small canal leading from the one, and by projection and pressure narrowing the other ; should this gland become much enlarged and indurated, these effects must be augmented, yet no evil will result so long as due care be taken that the effete matters collected in either part shall by natural or artificial means find a ready exit from the body. Simple enlargement and induration of the prostate gland will do but little harm, unless it be allowed to simulate stricture of the rectum and of the urethra, and thus induce disease of the gut or of the bladder. Besides this simple enlargement, the prostate is subject to such other diseases as may occur in similar parts, as inflammation, abscess, scirrhus, calculi, &c., and whenever they do occur, the peculiar situation of the gland will of course aggravate the evils.

LITHIC ACID DEPOSIT, GRAVEL, CALCULUS.

One of the most common urinary affections of old persons is the deposit of lithic acid, or lithate of ammonia, from the urine on its cooling ; it is seen to stain the bottom of the vessel of a red colour : this is one of

the consequences of indigestion, and may, in all probability, be traced to faults in diet. Saccharine and farinaceous foods and all such as are likely to pass quickly into acid fermentation, are likely to produce this state ; but when the person is otherwise in good health, red deposit in the urine can be scarcely looked upon as an important disease *per se*, it may be taken as an indication of impaired powers of digestion, and as a valuable guide to the treatment required ; but it is really a curative effort of the system to throw off the lithic acid improperly generated : the urine at the usual temperature of the body is capable of holding this deposit suspended or dissolved, but it is thrown down as the water cools, in the form of fine impalpable sand, which lines and stains the sides of the vessel.

But although the acid may be thus separated by the kidneys from the blood, it is not at all times thus taken up by the urine, to be by that fluid carried out of the body as excrementitious matter. It sometimes happens that the particles of lithic acid aggregate together and form lithic acid calculi ; these may be very small and pass more or less readily through the ureters to the bladder, there they may be retained and aggregate into stones of a larger size, or, under the name of gravel, they may pass through the urethra more or less easily ; or, again, the aggregation in the kidneys itself

may be so great, as to prevent their passing through the ureter, and stones in the kidney thus become formed. All these forms of disease, together with gout, and perhaps some forms of rheumatism, are in reality results of dyspepsia, of a faulty assimilation of the ingesta, often assisted by a plethoric state of the sanguiferous system. Such faults of digestion produce these consequences in that peculiar condition of constitution which has been hence called the lithic acid diathesis, and of which the gouty diathesis is to be regarded as one particular form of an hereditary character. The lithic acid diathesis is not necessarily gouty, for when the kidneys possess the power of eliminating the lithic acid, gout does not occur, but a deposit of red sand, gravel, or calculi, is produced : it is when the kidneys do not possess this salutary excretory power that gout occurs ; or perhaps some indefinable differences in the original constitution induce the one or the other result ; hence it is common to meet with persons who labour for years under lithic acid affections of various kinds, but never have any fits of gout.

Thus, then, although the deposit of red sand from the urine, on cooling, is in fact a discharge of baneful and excrementitious matter from out the body, and may therefore be regarded rather as a sanatory pro-

cess than a disease, it is highly important to remember that it points out a diseased action of the organs of assimilation, and that if therefore the acid continue to be generated in the system, it may not always pass off thus harmlessly ; it may be retained in the blood, or even if separated from it by the kidneys, its particles may aggregate, and gout, gravel, nephritic or vesicular calculi, may be the consequence.

It is at the period of life we are considering that these deposits in the urine most commonly occur, and often, perhaps, in those who have no hereditary or constitutional tendency to gout. They generally, when first seen, excite great alarm, more perhaps than there is occasion for, for if they result from some single act of intemperance, or some casual attack of dyspepsia, they will readily pass off, and perhaps not occur again. When they are constant, however, they are generally easily cured by the administration of proper medicines. With this view alkalies are often resorted to, but they may, and often do, produce a contrary evil of no less, perhaps of more, importance ; for not merely is the deposit avoided, and the acid character of the urine changed, but that fluid is rendered alkaline, and alkaline salts, the phosphates of lime, ammonia, and magnesia, are deposited : when this occurs, acid remedies are employed to remove the

alkalies,—again, the urine deposits lithates and lithic acid; and thus by alternate changes of remedies directed to symptoms only, a change of deposition is procured, but the diseased action nowise remedied; thus calculi are often seen which consist of alternate layers of acid and alkaline matter.

The diseased condition is truly in the organs of digestion, which allows of the abnormal formation of acid, or of acid or alkaline salts, which are carried into the blood and separated from that fluid by the kidneys, in order to be cast forth out of the body. Whilst, then, a single appearance of deposit in the urine may be regarded as the casual result of some irregularity in diet or digestion, and need not excite alarm, or give rise to much medical treatment, the continual appearance of such deposits indicates an abnormal action of the organs of assimilation, which demands the most vigilant and careful attention. The character of the deposits should be carefully examined into, the causes of the evil be sought for, and that cause, if possible, removed. It may sometimes be well to attack the prominent symptom (the deposit) by appropriate chemical remedies; but the real object that should be borne in view is, to prevent the formation of such deposit by the use of means which shall remedy the diseased condition of the digestive organs;

this being done, the deposit will cease to appear, “*sublata causa attollitur effectus:*” but the patient should be watchful of his own condition ; these are derangements peculiarly liable to reappear on very slight causes, and a careful attention to diet should be persevered in long after the purely medical treatment has been discontinued. In the lithic acid diathesis as well as in the gouty diathesis, I think there is good reason to believe that the habitual intemperate use of fermented liquors (wines or ales) is more hurtful than the drinking of distilled liquors (spirits or liqueurs) ; perhaps the latter pass off more readily by the kidneys and the skin : this should be borne in mind in regulating the diet. Sir H. Holland goes even much further than this :—“That period,” he says, “which begins the decline from perfect manhood, is marked generally by an excess, if it may be so termed, of the lithic acid, which continues more or less through after-life, testifying itself with the greatest safety, and often remedially, by large habitual discharges of this substance from the kidneys ; becoming a source of grave and various disease when this separation is insufficient or suddenly interrupted.” This physician’s opinions are so philosophical and deserving of so much respect and attention, that I have quoted his words, because I venture to dissent partially from his views on

this subject ; they imply that an excess of lithic acid and its discharge by the kidneys, is a normal condition of this period of life ; but surely if this were the case, it would occur in all persons, not in some constitutions only ; it would occur in the abstemious, temperate, and active, as well as in the indolent, the gross feeding, and intemperate. It is safer, then, and perhaps more correct, to consider its formation as the indication of a faulty condition of the digestive organs, and its elimination by the kidneys as a curative effort of nature—an action of the *vis medicatrix naturæ* : but I most fully concur in the value of the following practical observation by the same talented writer : “ I might specify many cases where practice is directed (often on a slight or single examination) to correct sediments in the urine, which are actually relieving the system by their free and abundant discharge.”

RETENTION AND INCONTINENCE OF URINE.

Paralysis of the bladder may be of two kinds : a loss of muscular power in the coats of the bladder, so that it cannot contract on its contents, and retention of urine and distension are the consequences ; or a loss of relative power in the sphincter, so that the viscus has not the power of retaining its contents, and a constant

incontinence of urine is the result. Both these may arise from injuries done to the spine, or from disease of the spinal marrow, which may prevent the due transmission of the nervous influence; but such cases are not peculiar to any age, whilst in advanced life they most frequently result from over-distension of the bladder. Often from the mind being intensely occupied, sometimes from motives of false delicacy, or from circumstances altogether unavoidable, as temporary confinement in a railroad carriage or elsewhere, the first sensations indicating fulness of the bladder, are disregarded; they become gradually stronger, and are repeated again and again, and are as often resisted; after a time, the violence of the urgency goes off, the bladder gradually yields to the distending force within it, and increases in size, becoming twice or even thrice its usual magnitude, until, when at length the obstacle being removed, the individual attempts to pass water, he finds that he is unable to pass a drop, all straining and endeavour, although painful, is useless, or nearly so; the contractile power of the viscus has been lost by over-distension, and a complete muscular paralysis of the bladder has ensued. Often, when the bladder is thus over-distended up to a certain point, a small portion of water will flow off involuntarily, or may be expelled by the natural

efforts, affording great relief to the fulness, and perhaps deceiving the individual most dangerously as to the nature of his case. Retention of urine from accidental circumstances may perhaps occur at any period of life, but it is most likely to occur in the aged, as, from debility, the muscular fibres more readily yield to a distending force, and when thus much stretched will sooner lose their contractile power : in the same manner, it often arises from general debility of the muscular coat, that the bladder is seldom emptied by the efforts of nature, but that after each attempt at micturition there is still much water left in the organ ; when then additions are made from the kidneys, the bladder resisting further distension, but not having power to expel entirely its contents, the sphincter partially gives way, and a constant dribbling of water, drop by drop, or every now and then a sudden and irresistible discharge of small quantities, takes place. This is a most miserable condition, and after it has been long existing is often irremediable ; but, how may it be avoided ? By remembering its causes, and acting according to the simple dictates of common sense. For all practical purposes, as far as the sufferer is concerned, retention and incontinence of urine in the aged may be considered as one disease ; but both consist in a want of power to empty the bladder, arising from over-dis-

tension, neglect, or debility. Let the old man then carefully avoid those causes of retention ; let him not allow his bladder, under any circumstances or from any causes, to become over-distended : if the tone of the muscular coat be thus lost, it may be indeed difficult to restore it ; let not a false delicacy, an interesting or important occupation, the habits of society or the inconvenience of time or place, interfere with the call of nature,—when she gives notice of a necessity to empty the bladder, let that necessity be complied with as speedily as possible, at all risks and inconveniences. In the aged, the golden moment, when the action of the bladder is still obedient to the will, once lost may never be regained. It is of the highest importance to avoid over-distension of the organ, and also to endeavour to empty it completely on each occasion ; avoid making water in the horizontal position, as when lying in bed, for it is then very difficult to empty the bladder ; a sitting position is more favorable, and perhaps in old or feeble persons is better than the upright posture, as it is easier, and therefore avoids all hurry. In passing water, do not strain or urge, but let it flow naturally ; be in no haste, but when the stream has ceased, wait, and perhaps after a few moments it will be renewed, and by such means the viscus may be completely emptied, and its tone preserved. It is

desirable to attempt passing water at stated periods in the day, even although no strong inclination to do so be felt ; and whenever about to proceed on a journey, to join society, or attend to business, which may occupy some hours, the aged man should never fail to attempt to pass water as the last of his preparations. When paralysis of the bladder actually exists, it may not be altogether irremediable, whether it arise from general or local debility, or from accidental causes ; much may be attempted by medical and surgical means for its removal, and if they fail altogether, the skill of the mechanician will make the evil endurable, but let there not be any delay in applying for relief,—time is of the utmost value, both in enhancing the power of remedial measures, and in avoiding the consequences and dangers of continued over-distension.

CHAPTER VIII.

DISEASES OF THE SANGUINEOUS SYSTEM.

IT would be impossible, in the compass of this short essay, and it is foreign to its purport, to enter into any full account of the diseases of the circulatory system to which age is peculiarly liable; I must therefore content myself with a sketch of the nature and character of the changes which occasionally or inevitably occur, and a view of the conduct necessary to be pursued in consequence. The circulatory system may be said to consist of the blood, and the organs (the heart, arteries, veins, and capillary vessels,) by which it is conveyed throughout the body. The duties of this system are—1st. To receive the fresh supplies brought by the nutritive organs, and to carry them to every part of the body, to restore the waste, and supply the wants of the economy. 2d. To take up by the minute venous branches, and to receive from the absorbent trunks the effete matters from every point of the animal frame, and to convey these excrements to the various excreting organs, (the kidneys, skin, &c.) to be by them cast off from the system.

It is clear, then, that the blood must be a fluid perpetually varying in its character and composition, as it is carrying to or from the body formative or excrementitious matters, even as a broad river bears on its surface to the remotest interior of a country all the supplies it may require, and carries off from every part its superabundance and its waste. But here the simile ends, the various matters are conveyed by a river along the surface of the stream, not mixing therewith, they do not, therefore, affect its integrity; but in the human economy, the various matters are not conveyed *by* the blood, but *in* the blood, and have become for the time a part of the circulating fluid, changing its character in various ways, but most essentially making it richer or poorer, and hence giving rise to a condition of plethora or anaemia. I shall say a few words on the first of these two conditions before examining the abnormal states of the organs of circulation.

PLETHORA.

A plethoric state of the body means, not only a condition in which the actual quantity of the blood is greater than is usual, or than is required, but also a state in which the blood itself, although not increased in quantity, is richer than ordinary, and fuller of

restorative and formative materials. If a small quantity be drawn from the body, it will appear deeper in colour, and thicker than usual ; if allowed to coagulate, the clot will be larger in proportion to the fluid around it than ordinary, and of darker colour ; the blood contains more fibrine and red particles, and less serum, than ordinary. If this state continue, and this fluid, thicker and richer than is required, overladen with nutritious matter, circulates through the body, a local plethora of one or more organs must ensue ; more will be deposited somewhere than is required, the circulation through the capillary system will be difficult, calling on the heart and arteries to make increased exertion to drive the viscid fluid onwards, and thus derangement in the functions of the organs most affected, and disease of those organs, will be induced ; the heart and larger blood-vessels will become thickened in structure, and the smaller ones dilated in size.

It might be supposed that such a state of things is not to be anticipated in the aged, that it is during the period of youth or early manhood that a plethoric condition is mostly to be found ; but it must be remembered, that whilst the demands of the frame for supply and renewal of parts continue great, as is the case in early life, it is not likely that a really plethoric condition will arise ; the activity and energy of early

life serve to carry off any excess very easily, but when the meridian of life is passed, when the demands of the system for new formative matter has ceased altogether, and when the process of renovation goes on more slowly than heretofore, it is then that a plethora of blood is most to be feared and guarded against.

In proportion as the aged become less active both mentally and physically, lead a more idle and sedentary life, and yet indulge in diet—stimulating the appetite by exciting condiments, gratifying the stomach by large supplies of food, and neglecting to secure the regular and full action of the bowels and skin,—so will the blood become loaded with nutritive and formative matters far beyond what is required ; be augmented in quantity, and richer in quality, and be forced through the body by the increased exertion of the heart, giving rise to hypertrophy of that organ ; or be carried on by the arteries with difficulty, in the like manner distending them, and weakening their coats, increasing the calibre of the venous trunks, moving languidly through the capillary vessels everywhere, and ultimately in some organs, where the difficulty is greatest, producing a truly local plethora. When this occurs some over-distended vessel, somewhat weaker than the rest, may give way, and effusion of blood ensue ; and thus is apoplexy of the brain or of the lungs induced, or some

important organ of the body becomes gorged with blood, greatly increased in size, and stimulated to over-action ; or the action induced may be of an unhealthy character, and thus give rise to malignant disease.

These evils, which may follow in the train of plethora, especially in the aged, are nowise exaggerated ; they must ensue in a greater or less degree if the plethoric state continue, and it is therefore of the highest importance that the occurrence, and still more, that the continuance of a state of general plethora should be avoided. It is true that the physician would find it easy to remove this condition, to reduce the quantity and change the quality of the blood, and thus to prevent the consequences enumerated ; but although this may be an easy task, it is not, at least in the aged, always a very safe one. The means necessarily demanded to remove plethora may induce anaemia ; a small excess constitutes a plethoric condition in the aged, and yet they often bear but very badly the means of reducing this excess, which, however, the case imperatively demands. The physician has here really to sail between Scylla and Charybdis. The most profound ability, and the greatest caution, and the aid of enlarged experience are required, safely to direct his course. But all this skill and caution may be easily rendered

needless : the signs of approaching as of existing plethora in the aged are so clear and unmistakable, that he must be most careless of his own health who allows it to become established, and does not at the first warning seek for the employment of remedial means.

The approach of a plethoric condition is often marked by insidious and deceptive signs, especially in the early period of age. There is a feeling of increased power a flush of the face and general surface, and a sense of plumpness and ease, which seem to imply high health, and which are regarded by the individual as flattering testimonies of that state and of the manner in which he resists the approach of the infirmities of age. This condition is, therefore, often not only misunderstood, but encouraged. An undue degree of exertion and exercise is pursued, and an undue quantity of food taken to support that exertion ; and thus, for a time, an unnatural condition of the system is sustained, leading, however, to evil results. Such men are observed by their friends, and are thought by themselves, to be wonderfully well and active. Wise observers would say they are too well ; they are in an unnatural state of perpetual excitement. Let persons between 50 and 60 years of age be careful of being too well and the more especially if this marvellous appearance of health,—this marvellous accession of vigour,

has come on suddenly, and seems to be on the increase.

After this state has endured for some time, or sometimes without this premonitory stage, the marked symptoms of oppression from plethora come on. The person feels heavy and listless, indisposed to exertion, seeks for sedentary occupations, is inclined to sleep, or rather to doze away many hours ; complains of weight and fulness in the head, of being fatigued by continuous mental exertion, of the sight being tired, and the eyes feeling strained by long reading or writing. The sleep is heavy, but unrefreshing ; the appetite is not urgent, but the food is greatly enjoyed, and highly seasoned dishes are sought for ; the countenance often looks florid and healthy, and the limbs plump ; the breathing is difficult and oppressed, especially when going up stairs, ascending a hill, or attempting to move quickly ; the pulse is large and full, although not quickened ; there is every appearance of health and strength, yet the individual complains of feebleness and moves about heavily and difficultly : in a word, the vascular system is overloaded, and oppresses the whole organisation. No time should be lost in restoring it to its natural condition, by abstaining from all stimulants ; by diminishing the quantity of food ; by active but not exciting exercise

and exertion ; by promoting evacuations by the bowels, skin, and kidneys ; and perhaps by the abstraction of blood, or by the employment of such medicines as science and experience may point out as needful. But in all this, let the individual proceed with great caution, and travel not but with safe and sure guidance. There is not in the whole range of practical medicine more difficult questions to determine, than those which concern the abstraction of blood or the use of depressing agencies in the plethoric condition of the aged.

CHAPTER IX.

DISEASES OF THE HEART AND ARTERIES.

ORGANIC diseases of the heart and arteries are amongst the most important affections to which age is liable. They consist in changes of structure, few if any of which are remediable; and the entire attention of both the physician and patient must, therefore, be directed to prevent their progress and obviate their ill effects. It would be useless here to give a description of the diseases of the heart, or of their treatment. I shall merely sketch the nature of the changes which may take place, and point out the patient's proper line of conduct, as far as diet and regimen are concerned.

The heart is a hollow vessel, consisting of four chambers acting alternately on their contents by the muscular power of its walls, and thus alternately receiving and propelling the blood. Now it is manifest that this organ must be subject to all the diseases to which muscular substance is liable; it may waste, it may increase in size. Its walls may, therefore, become thicker or thinner; its cavities may

become dilated, and perhaps narrowed in capacity. The circulation may go on regularly, the stream of blood passing from the veins to the heart, from the heart to the arteries, and, within the heart itself, from auricle to ventricle, without let or hinderance ; or the circulation may be impeded by obstacles which affect its due course. At the entrance of the ventricles, at the entrance to the great arteries, nature has placed valves to regulate and divide the waves of blood, and prevent regurgitation. These valves may be, and often are, the seats of disease ; their structure may be altered. Depositions of earthy or bony matter may occur in their substance, preventing the due performance of their duties, or rendering them all but useless.

Derangements may occur in one or more of the valves. They may vary in intensity ; but, be they greater or less, they manifestly cannot exist without seriously affecting the circulation ; without compelling the muscular coat of the heart to such irregular and violent exertions as must occasion diseased changes in its structure ; without often producing the most distressing symptoms of anxiety about the chest, restlessness, faintness, palpitations, intermissions, and irregularities of pulse, all the symptoms so well known as angina pectoris, and sometimes even sudden death ; whilst, if the disease go on gradually increasing, and

the circulation become more and more irregular and oppressed, dropsy in some one or other of its forms will be the inevitable result.

This is a dreadful picture, and it is rendered more so by remembering that these diseases are very common, that they commence soon after middle age, and often go on so insidiously for some time, that they occasionally produce sudden and fatal results, when there was not the most remote suspicion of their existence. The man apparently healthy and robust, in the full enjoyment of his faculties, and in the active pursuit of the affairs of life, may suddenly drop down dead, as though a bullet had passed through his brain, and, on examining the body after death, disease of the substance of the heart, or of its valves, or of its blood-vessels, is for the first time discovered. Yet this dreadful malady might have been known,—its nature and its extent might have been ascertained. The happy invention of the stethoscope has enabled us to learn, with almost unerring certainty, in fact to feel, the actual condition of the heart. But too often the early symptoms are neglected; they are regarded as too trifling to deserve attention; they perhaps only occur in any slight excitement to the circulation, and then pass off quickly. This very transient character, which would excite suspicion in the physician, lulls the

fears of the patient: no note is taken of a merely occasional suffering, no examination of the chest is resorted to, and the fearful evil remains unknown.

Yet it is manifestly of the highest importance to an invalid to ascertain as early as possible the existence of cardiac disease, its nature and extent; for, although it may be the merest quackery to promise a cure,¹ its progress may be arrested or delayed, the evils which follow in its train may be obviated, and in a word, by boldly looking the enemy in the face, and courageously confuting him by well-regulated conduct, the invalid may often secure to himself many happy years, and even attain a good old age, although he well knows that his heart is not in a normal condition.

And what are the means by which this desirable effect may be brought about? Are the means within the power of the patient himself, or must he be constantly under the advice and direction of his physician? He should be guided by the advice of his physician, and be under medical surveillance; but the means of arresting his disease are in his own power, and it is on himself he must mainly rely: all that can be said as to conduct in organic diseases of the heart, may be contained in one golden rule, to which all others

¹ Slight cases of simple hypertrophy have been supposed to be, and perhaps are, occasionally curable.

are corollaries :—*Promote a calm and equable action of the heart and arteries: therefore avoid everything which may even remotely interfere with the free circulation of the blood.* Suppose a stream of water to flow for some miles between two upright banks, making several windings in its course, and at each turn meeting with projecting points of land of various forms and shapes, it is evident that so long as it flows quietly along without undue force and without undue impediment, it will produce but little effect on its restraining banks, or on the projecting headlands; yet in the progress of ages, the banks will be partially worn away, and the projecting points be rounded or removed; but, if from any cause the quiet stream be often violently agitated and tossed to and fro against its banks, and be driven suddenly and rapidly, or irregularly, on its course, a very different result must follow—the slow work of time will be anticipated, and a few days or hours of violent excitement may produce as much destruction as ages would have accomplished.

Even so it is with the circulation of the blood when any abnormal condition of the heart exists. So long as the various processes of life are regularly and quietly performed, that fluid may pass to and from every part of the frame without injuring the propelling organs, or the conveying vessels; but if mental or bodily excitement

be allowed, if the circulation be hurried, or any way interfered with, the diseased heart is forced into irregularity of action, which it may not be able to effect, and may therefore suddenly stop altogether; or the overstrained efforts to sustain the circulation will act on its substance, increase the existing disease, impede the regularity of its future action, and render it less capable of contending against future causes of excitement.

Let the invalid, then, carefully abstain from taking too much food at one meal, for the distended stomach pressing on the great blood-vessels, must interfere with the freedom of the circulation. The meals should be very moderate, and of the most light and easily digestible food. It is of almost equal importance, for the same reason, to avoid taking large quantities of fluids, even though apparently of a harmless character; the bulk is the point to be chiefly objected to. As the supply of food should be moderate, so great care should be taken that the refuse be not retained in the body, disturbing the larger intestines, generating flatulency, and compressing the other contents of the abdomen. Unless the bowels act freely and efficiently, they must be emptied once at least in every day, by the aid of enemata, or of some mild aperient remedy. I say some mild aperient remedy, and the milder the better, so long as it will

effect its purpose. Constipation is by all means to be avoided; but purgation, especially in advanced age, is almost equally undesirable.

The regulation of drinks may be highly important, but must depend on the peculiarity of constitution, habit, and occupation. As a general guiding principle, all stimulation must be avoided, but sustaining means may be required, and the glass of wine, or even the small quantity of brandy-and-water which, in one case, would prove hurtful, may be not only useful, but highly desirable, in another; here, none but the able physician can decide. So, too, tea and coffee are to some agreeable, refreshing, and sustaining beverages; to others, violent excitants to the nervous system. No definite rule can be given for their use.

Nothing is more important than the management of exercise by the invalid. Fatigue and indolence must be alike avoided; the first is both exciting and exhausting, hurrying the circulation at first and depressing the nervous powers afterwards; the second induces obesity, somnolency, and langour of the circulation; whereas, exercise and employment in the open air, regular and moderate, not hurried and occasional, will promote the due performance of all the vital functions, and sustain the circulation in an equable course.

Whilst carefully regulating the exercise of the body,

the employment of the mind must not be neglected. At all times, a calm activity of mind and a due regulation of the passions are essential to the preservation of health ; but when any cardiac disease exists, they are of the highest importance, and absolutely indispensable. It would be idle here to expatiate on the influence of the mind on the body, or the direct effect of excitement and fatigue of the nervous system on the rest of the body, and on the organs of circulation especially ; so direct is the influence of the passions on the heart, that it is poetically imagined to be their place of residence. With this I have not anything to do ; physiology, not poetry, is the subject of this essay ; but were the heart actually the seat of the passions, it could not be more directly influenced by their misuse than it actually is through the influence of its nerves. Rage, jealousy, revenge, will excite,—grief, fear, melancholy, will depress its action, and all will tend to increase any existing disease. The depressing passions do this slowly and continually, but the greater danger arises from those of excitement, as fits of rage which, sudden and violent in their action, *must* be very hurtful, and *may* be suddenly fatal.

Let the invalid beware. I must not omit here to state that nothing is more directly hurtful to persons labouring under cardiac disease, than the too frequent

or too violent pursuit of venereal pleasures. It cannot be needful to enlarge on a subject so self-evident, but instances are not uncommon in which death has occurred, even at the moment of indulgence.

The due performance of the functions of the kidneys and of the skin should be carefully watched over. If the digestion be good, the kidneys will generally act well; the sustaining a due state of transudation from the whole surface is less certain and more difficult. The skin naturally becomes dry in the aged, and the comparative feebleness of the capillary circulation tends directly to this result, and causes also coldness of the hands and feet, and chilliness of the general surface of the body. All this should be sedulously cared for: warm clothing, frequent ablution, moderate exercise, frictions to the limbs with mild stimulant liniments, or the flesh-brush, the adoption of the recumbent posture when at rest, are the best means that can be adopted: to these might perhaps be sometimes added the frequent use of the tepid (not warm) bath (from 93 to 96 F.), but this is a doubtful remedy, with many persons it is undoubtedly agreeable and useful. I had a patient who laboured for several years under hypertrophy of the heart with valvular disease, and who found decided benefit from the use of the tepid bath twice a week, he always expressed himself much

relieved by it, and regretted greatly if any casual cause prevented its use ; yet it must be confessed that not unfrequently the use of the bath, especially if used too warm, may prove stimulant and hurtful : no such objection, however, can be made to the employment of the foot or rather leg bath, which has a decidedly good effect in inducing perspiration, and promoting a free circulation in the extremities ; one of those boot-shaped vessels which are sold at the tin shops under the name of leg baths should be used. Put into this two handfuls of bran and two tablespoonfuls of good flour of mustard, then fill it about half full of boiling water, and after allowing it to remain at rest covered up for half an hour, add as much cold water as may be needful to bring it to the required temperature, this bath may be often used for twenty minutes or half-an-hour, or even longer, before going to rest ; it will usually induce an agreeable glow on the surface, followed by a refreshing moisture, or by a mild or sometimes by a copious perspiration. I do not think it is needful to say anything more to the invalid labouring under this very common and most important of the evils of advanced life,—disease of the heart or of the blood-vessels connected with it ; but I may recapitulate, in a concise form, the rules of conduct he should observe :

1. Let the supply of nutriment be moderate, light, and digestible.
2. Carefully observe and regulate the excretions.
3. Take exercise regularly but not violently.
4. Let the mind be occupied by some interesting and agreeable pursuit.
5. Avoid fatigue, mental or corporeal.
6. Avoid the violent exercise of the passions, whether exciting or depressing.
7. At the very commencement of any derangement of health, apply at once to those on whose judgment you can rely and implicitly follow the course recommended by them.
8. Be not despondent. Your disease is incurable, and perhaps necessarily progressive, but the progress may be very slow indeed, the evils to be endured very light, and a happy and cheerful old age may be attained.

CHAPTER X.

APOPLEXY AND HEMIPLEGIA.

APOPLEXY and paralysis are both diseases which belong to an advanced period of life, and which occur suddenly. Apoplexy consists in a total loss of speech and the power of voluntary motion, and the use of the external senses : the person attacked is like one in profound sleep, and this condition may be gradually recovered from partially or completely, or (as more frequently occurs, after enduring a short time) it terminates in death. Hemiplegia is the same disease affecting only one half of the body, and may occur suddenly, or may result from an attack of apoplexy. It does not necessarily affect life ; it may be gradually recovered from, or may endure for several years. Both diseases are most frequently caused by the bursting of a blood-vessel within the cerebrum, the effused fluid pressing on some part of the brain, and thus preventing the performance of its functions completely, as in apoplexy when affecting both sides of the brain, or partially, as in hemiplegia, when the mischief is confined to one

side only, and the other side remaining sound, serves well to sustain the functions essential to life. In some cases of hemiplegia, the clot of blood thrown out becomes gradually absorbed, and the pressure on that part of the brain being thus gradually removed, it resumes its duties, and the affected limbs regain their power of motion. In many cases of apoplexy no blood whatever is extravasated, but all the symptoms arise from a turgescence of the blood-vessels within the head, and an increased force in the action of the heart acting on the distended tubes : the effect of such local plethora on the sensorium may be evanescent or permanent, it may vary from a slight giddiness or stupor, passing off in a few minutes, to a total insensibility which may gradually be recovered from, or may continue so long as to extinguish life. In all cases a general or local plethora is the real cause of the disease. Now, a local plethoric condition of the brain is the consequence of a general plethora of the whole body, or of a too violent action of the heart, unless, indeed, it be caused by disease within the brain itself, or by tumours somewhere about the neck, great obesity, or any such mechanical cause as may interfere with the due circulation of blood in the head : hence it arises that apoplexy is not unfrequently caused by a full meal ; the distended stomach, by its pressure on the large

venous trunks and on the diaphragm interfering with the freedom of the circulation, and hence, too, so many persons are found dead in their beds from apoplexy, especially if they have retired soon after eating largely, the horizontal position promoting the evils which a distended stomach, and a too rapid circulation are likely to induce. The more it is examined, the more it becomes clear that a plethoric condition and an increased rapidity and force of the circulation are the usual causes of apoplexy and hemiplegia. The attacks themselves are always sudden, and often irremediable ; but they generally give distinct and unmistakable signs of their approach. The premonitory signs are clear and continuous, especially in those who, from conformation or constitution, are peculiarly predisposed to their attacks ; and the means of protection are so completely within the power of the individual, that to know the enemy which threatens approach, to watch him closely, and to be at all times prepared to oppose him vigorously is, really, to deprive him of half his terrors. What are the peculiarities of conformation and constitution most prone to an attack of apoplexy ? What are the signs which give warning of its approach, and how is the occurrence to be prevented ?

The conformation which chiefly predisposes to apoplectic seizures, is manifestly that which would tend

to impede the free circulation of blood within the cranium. A short thick neck and large head, is the one most commonly insisted on; to this may be added accumulations of fat, or any great increase of size, normal or abnormal, which may obstruct the circulation, and thus create turgescence in the veins of the head. It would be difficult to point out any peculiarity of constitution which would tend to induce apoplexy, yet there cannot be any doubt that many families appear to be peculiarly prone to be so affected. Every physician must be able to call to mind families in which several members, after the age of 60, suffered from apoplexy or paralysis, and in which the premonitory symptoms are, more or less, constantly present; this is the natural result of an hereditary frame of body and a similarity of habits and modes of life. A stout thick-set man, with a short neck and large head, being the son of a father of similar form, who had died of apoplexy, would, undoubtedly, be very likely to be attacked by the disease; but rather in consequence of his conformation, than of his parentage; and I believe that, if he had been tall, thin, and with greater length of neck, he would, in the same proportion as he had deviated from the ancestral type, have escaped the liability to cerebral congestion.

It will thus be seen that the tendency to apoplexy differs widely from the tendency to what are more correctly termed hereditary diseases, as gout, scrofula, phthisis, insanity, &c. (vide page 123); there is no such thing as an apoplectic diathesis. Apoplexy, at least that form of which I am speaking (*apoplexia sanguinis*) is not, in fact, a disease at all, but a mechanical injury done to one of the most important organs of the body. Compression of the brain necessarily prevents the performance of its functions, partially or wholly, and thus produces paralysis or death; and this compression is effectually the same, whether it arise from the bursting of an artery and the consequent effusion of blood, from a fracture of the skull and the consequent depression of a portion of bone, or from inflammation within the cranium and the consequent effusion of serum, or formation of matter; in neither case does the individual die from disease of the cerebral substance, but simply because the action of the brain, which is essential to life, is mechanically obstructed; in either case the mechanical cause being by any means removed, its effect would cease, the fluid effused, whether sanguineous, serous, or purulent, may be absorbed; the surgeon may remove or raise up the depressed portion of bone, and the enfranchised brain will resume its activity.

Such mechanical obstruction from effusion of blood is more likely to occur in the aged than earlier in life ; first, because from disease of the heart (frequently existing) the primary impetus to the circulation of the blood is less regular than heretofore ; secondly, because the arteries have lost something of their tonicity and elastic form ; and thirdly, because from increased obesity, or other causes, the return of blood by the venous trunks is more or less impeded. Yet so frequent is the occurrence of apoplexy in persons whose ancestors had suffered from the same affection, that many writers speak of it distinctly as an hereditary disease, whether the peculiar form of the body would tend to induce it or not. Be this as it may, the causes which may induce an attack, and the premonitory signs of its approach, are the same at all times, and these warnings especially demand our attention. Whatever may excite the action of the heart, or derange the balance of the circulation—whatever may drive towards the head a larger quantity of blood than ordinary, or send the ordinary supply of blood inwards with undue force and rapidity, must induce a turgescence of the blood-vessels within the cranium, and may give rise to rupture of one of them. As far as the conduct of the individual is concerned, then, the four great exciting causes would be—1. Intemperance

in food or drink. 2. Violent excitement. 3. Rapid exercise, or strong muscular exertion. 4. Intense thought or study. All these directly tend to gorge the blood-vessels of the brain; and all these are directly under control, and can be altogether avoided: but the same effects may be produced more or less rapidly by causes beyond the control of the individual, that is to say, in consequence of the diseased condition of other parts of the body,—diseases of the heart, of the kidneys or chest, tend directly to disorder the circulation; and, whenever the system has long been accustomed to great discharges from any part of the body, the too sudden suppression of such discharges very commonly produces an ill effect on some internal organ, and most frequently on the brain. In this way the too rapid disappearance of the catamenia often induces various and painful affections of the head, and sometimes even apoplexy. A sudden arrestation of long-accustomed discharges from the bowels by piles, or from the mucous membranes of the bronchi in the catarrhus senilis, or from ulcers of long standing, or issues or setons which have been long endured, may, by throwing a larger quantity of blood inwards, induce affection of the brain.

But however arising, and from whatever causes, a plethoric condition of the blood-vessels of the brain

will produce at once symptoms of cerebral oppression. There will be drowsiness and headache, not a headache which can in any way be referred to indigestion or derangements of the stomach ; there is no nausea, no bad taste in the mouth, but a fulness and tightness in the head, a spanning of the circumference, and this is increased on lying down or on moving about, and it is accompanied by vertigo, especially on stooping to pick up anything from the floor. All the external senses may also suffer ; there is often a sudden drowsiness, double vision, or even blindness, for a short time ; there is numbness or tingling at the tips of the fingers, or along one or more limbs ; some one or more muscles seem to lose their power, and the will its control over them. The mental faculties exhibit the same indistinctness ; there is often loss of memory, especially of words and names, which are wrongly used ; there is a confusion of ideas and a feeling of incapability to fix the mind on any object, and arrange a train of thought. The individual, after several fruitless attempts to do so, gives it up in despair. "I am confused," he will say ; "I cannot direct my thoughts to it."

These symptoms, or some of them, or similar ones, may occur more or less frequently, be simply evanescent, or endure a longer or shorter period of time ; they may be brought on by some evidently exciting

cause, as a fit of rage, and may pass off, leaving no apparent effect behind them; they, or some of them, may recur again and again, with or without any evident reason for so doing, but at all times they are distinct and clear warnings of the impending evil, and woe to him who neglects to yield to them immediate attention. The evil may be prevented; the blow may be averted; but if it fall, no one can regulate its force, and but seldom can its effects be remedied.

The means of averting attacks of apoplexy are evidently such as may prevent—1st, a general plethoric condition of the system; 2d, a local plethoric condition of the brain; 3d, a temporary congestion from excited action of the heart, or obstruction to the freedom of venous circulation. Let all luxurious habits, therefore, be studiously avoided. Let the diet be moderate in quantity, and of the simplest and least stimulant kind; it may be well, perhaps, to abstain wholly, or nearly wholly, from animal food; let all fermented liquors be rigidly abstained from, unless taken under medical guidance; let active exercise be daily taken even to the extent of a slight feeling of fatigue; walking moderately, not too fast, is the best exercise; running, horse-riding, rowing, and athletic games are all objectionable. Avoid filling the stomach either with food or drink, even of the most mild

character ; the bulk of the distended stomach may be very hurtful. Do not sleep or lie down after meals ; indeed, the recumbent posture should be as much as possible avoided, except when in bed, and then the head should be sufficiently raised on a hard pillow. Beds of soft feathers or down, should be avoided, and persons should not retire to bed with the stomach full. The time allowed to sleep should be so much as may be felt needful to recruit the body—no more ; no fixed rule can be given, as it must depend on the employment and exercise of the waking hours, but generally, six or seven hours will be amply sufficient. Let the dress be such as shall preserve a uniform temperature of the body and promote an easy transpiration from the surface, and such especially as will preserve warmth in the extremities, and not impede the circulation. It should fit easily and loosely to the body, so as to afford free play to the limbs, but bandaging of all kinds should be most carefully avoided ; this is a point of great importance throughout the body, but most especially as regards the throat, for if the external veins of the neck be compressed, apoplexy might at once result, without any other exciting cause. The mental pursuits should be no less carefully regulated than the bodily occupations ; and, guided by the same principles, agreeable employment of the intellect should

be promoted ; exciting occupation of the mental powers should be carefully avoided ; but there is an important point in which there should be a marked difference in the exercise of body and mind in persons prone to apoplexy,—bodily exercise may be, nay, should be, persisted in, even up to the point of slight fatigue ; a certain degree of corporeal exhaustion (so that all excitement of the circulation is avoided) must be useful in promoting freedom of circulation, facilitating digestion, and preventing obesity ; but in mental exercises, no more should be allowed than sufficient to retain the organs of the mind and senses in agreeable activity ; the slightest degree of fatigue, the most trifling straining or excitation of the mental powers must never be allowed. The brain is the organ of the mind and of the senses, and it is our chief object to protect this organ from a local plethora of even the most evanescent kind ; to strain its power, to think intensely on some abstract question in science, to endeavour to unravel some web of sophistry, or some intricate matter of worldly moment, to strain the eye or ear, or the other organs of sensation, by the reading of small print, the continuous use of optical instruments, or by any means which draws largely on their power,—is assuredly to call up for a time a determination of blood, however slight, to some one or more parts

of the brain; and to continue any employment of the mind up to the point of fatigue, is to create a temporary plethora of the whole organ, and thus directly to induce the evil we so strenuously desire to avoid. Besides all these, there are very many prophylactic means which fall within the duty of the physician to direct.

Whether it be necessary to relieve the system by bloodlettings, whether these should be general or local, how often they may be required, what other evacuant means may be needed, and whether any directly depressing agents may be occasionally advisable, with many other important considerations which may naturally arise, or which slight deviations from health may induce,—demand for their correct solution a great combination of knowledge, skill, and experience; and he would be unwise and careless of his own well-being who should venture to resolve such questions for himself. The invalid may, nay, must assiduously watch over his own condition, and may thereby preserve himself in good health; but woe unto him if he attempt to pass the boundary and to judge for himself when any casual derangement of health occurs, or when more serious disease appears to be impending. It would be easy to fill a volume with well authenticated tales of danger from neglecting the warnings of

approaching apoplexy, and of the good consequences which result from early attending to them.

I select one from the many, because that one is very remarkable and convincing, and I give in the clear and energetic language in which it is told by Dr. Watson, in his admirable lectures on the *Principles and Practice of Physic*, vol. 1, p. 491.

"The late Dr. Gregory of Edinburgh, used always to mention in his lectures the case of Dr. Adam Ferguson, the celebrated historian, as affording one of the strongest illustrations he ever met with of the benefit that may be derived from timely attention to the avoidance of those circumstances which tend to produce plethora and apoplexy. It is, perhaps, the most striking case of the kind on record. Dr. Ferguson experienced several attacks of temporary blindness some time before he had a stroke of palsy, and he did not take these hints so readily as he should have done. He observed, that while he was delivering a lecture to his class, the papers before him would disappear—vanish from his sight, and reappear again in a few seconds. He was a man of full habit, at one time corpulent and very ruddy, and though by no means intemperate, he lived fully. I say he did not attend to these admonitions, and at length in the 60th year of his age he suffered a decided shock of

paralysis. He recovered, however, and from that period, under the advice of his friend, Dr. Black, became a strict Pythagorean in his diet, eating nothing but vegetables and drinking only water or milk. He got rid of every paralytic symptom, became even robust and muscular for a man of his time of life, and died in full possession of his mental faculties at the advanced age of 93, upwards of 30 years after his first attack." Sir W. Scott describes him as having been, "long after his 80th year, one of the most striking old men it was possible to look at. His firm step and ruddy cheek contrasted agreeably and unexpectedly with his silver locks, and the dress he wore, much resembling that of the Flemish peasant, gave an air of peculiarity to his whole figure. In his conversation, the mixture of original thinking, with high moral feeling and extensive learning, his love of country, contempt of luxury, and especially the strong subjection of his passions and feelings to the dominion of his reason, made him, perhaps, the most striking example of the stoic philosopher which could be seen in modern days."

So common are affections of the brain of this character, that it has been asserted that one fourth of those who die above 70, perish from these diseases; and there cannot be any doubt that they are becoming

much more rife than formerly. Dr. Heberden states that the number of fatal cases recorded in the bills of mortality at his time was doubled since the commencement of the previous century, and as social habits tend daily more and more to the increase of mental labour in all classes, cases of disorder of the brain of all kinds must be greatly augmented, and must continue to become more numerous; hence they imperiously demand constant watchfulness on the part of individuals, and careful study on the part of physicians.

CHAPTER XI.

DISEASES OF THE SKIN.

WE are informed by Mr. Erasmus Wilson, who has examined with great care and ability, the condition of the skin both in health and disease, that he "counted the perspiratory pores in the palm of the hand, and found 3528 in a square inch. Now the number of square inches of surface in a man of ordinary height and bulk, is 2500—the number of pores therefore 7,000,000.—('Treatise on Healthy Skin,' p. 342.) Well might that gentleman exclaim, "What if this drainage be obstructed?" Yet it is often obstructed, and hence there arise many and various diseases at all periods of life, but as age advances it becomes habitually obstructed. The skin, as has been explained, becomes dry, harsh, wrinkled, and discoloured; and almost ceases to be an excretory organ. The capillaries, which are distributed over the surface of the body, and keep up a constant transudation from it, have become nearly obliterated, and perspiration is almost at an end. When then the

importance of the skin as a secreting organ is considered, it will be easy to understand that many evils may result from the cessation of its functions, and hence the importance of preserving the integrity of those functions as completely and as long as possible.

In early and middle life the skin appears to be the great safety valve by means of which sudden outbursts and irregularities are remedied, excess or deficiency in the actions of various organs compensated, and the true balance between the actions of the various parts of the animal machine, preserved or restored. The sweating stage of a fit of ague indicates, that (for the time at least,) the diseased action has passed by, and a healthy condition is about to be re-established ; a sweat is the natural and healthful conclusion of all fevers, and the best symptom of the decline of all inflammatory affections. If the action of the heart be suddenly and alarmingly increased, a profuse sweat will often break forth and obviate the danger. The transudation from the skin is diminished if the kidneys act profusely, but increased if their action be deficient ; thus, too, we pass much more water in cold than in hot weather, and even in cases of obstinate obstruction in the alimentary canal, the skin often seems to make an attempt at compensation. It is well said by Revielle Pariset, (*'Traité de la Vieillesse,'*

p. 400,) "En general les hommes d'un certain âge qui transpirent facilement sont presques assurés de vivre sains, et si deux viellards amis se rencontrent, ils peuvent dire indifféremment comment va la santé, ou comment va la transpiration." The coldness, like the dryness of the surface in the aged, is the natural consequence of the degeneracy of the cuticular circulation, we should, therefore, do all in our power to keep up the due action of the capillary vessels on the surface, and thus avoid cold and promote transpiration. The best means of affecting this object are clothing, exercise, bathing, and friction. All these are highly deserving attention, yet all, except the first, are singularly neglected. It should always be remembered, that as the action of the heart in the aged is slower and more feeble than in early life, the generation of heat, even if it go on normally, (which can very rarely be the case), must go on slowly—hence the clothing should be such as will best retain the heat of the surface. Fabrics made from silk or wool effect this purpose, I think, far better than those made from cotton or flax. I have often observed this, and it may be well to remember that the former two materials are animal productions, whilst the latter two are derived from the vegetable kingdom. But, of whatever materials or however constructed, the clothing

of the aged should be ample, complete, and easy, covering all parts of the body, yet not compressing any; and having especial regard to the extremities, as in them the circulation must be presumed to be languid; great care should be taken in passing from a heated to a cooler atmosphere, to defend the body from the effects of the change by temporary¹ addi-

¹ I say "temporary," for it is most common to observe that persons will carefully wrap themselves up, so as to be well defended against cold previously to going out, yet if their avocations require that they should call at several places, and pass for a time into a warmer atmosphere, and then again into a colder one, they make no alteration in, or change of dress; but carry all the defences against the colder atmosphere into and out of the warmer one, thus rendering them after a time nugatory, or worse than nugatory, as becoming in the warmer places burthensome, and, perhaps, exciting perspiration, which a return into colder air will assuredly check. This conduct is about as reasonable as would be that of an individual, who should carry out with him an umbrella, as a defence in case of rain, but in place of using it only when required should keep it at all times expanded above his head. "Tout homme qui a vécu conçoit de lors l'importance du précepte de faciliter et de maintenir la transpiration, et d'empecher le refroidissement qui a lieu conséutivement après une sueur plus ou moins abondante. Ce dernier point est tellement essentiel qu'on trouve des viellards qui, par une sorte d'exception ou par une constitution speciale suent très facilement; mais s'ils n'y apportent beaucoup des precautions, ils n'en sont pas moins sujets à de fréquentes affections catarrhales: c'était là ce qui étonnait un viellard qui me consultait. 'Je transpire facilement, abondamment, me disait-il, et néanmoins je m'enrhume souvent.' Mais je l'avertis que l'espece de prérogative dont il jouissait était à peu près nul à cause du refroidissement consécutif à la peau, qu'il ne surviellait pas assez; il en comprit l'importance, et depuis il fut rarement atteint des maladies dont il se plaignait." (*Revielle Pariset*, p. 401.)

tional covering. It should be well borne in mind, that the coldest portion of the day is usually just before the dawn, that quiet and rest diminish the force and frequency of the heart's action, and that therefore, especially at night, the coverings should be ample and warm, yet as little burthensome as possible. The coverlets stuffed with eider-down, now commonly made in imitation of the "*überbett*" of the Germans, are admirably adapted to effect all these purposes.

The exercise taken by persons far advanced in life must of course be regulated by their strength and ability, and by the condition of the atmosphere—but it should never be altogether abandoned : it should not be forgotten that walking or riding, the play of the muscles and the movements of the limbs are necessary to keep up the free circulation on the surface, and especially so in the extremities. A valuable accessory to the same end is found in the frequent use of the tepid bath. Whether regarded as a means of keeping the skin clean—of equalizing the temperature, or of gently stimulating the whole exterior of the body—the immersion in water about 90 or 95 degrees of heat, is highly useful and very agreeable. It is surprising how much bathing is neglected in this country, notwithstanding the well directed efforts of many philanthropists lately, to make it easy, cheap, and popu-

lar. We moderns, who boast our superior civilization, might take some very important sanatory lessons on this subject from the ancients. The elaborate and luxurious bathing establishments of the Romans, were resorted to for health as well as for pleasure, and were agreeable sources of both ; but, little and imperfectly as we follow their example in regard to immersion in water, we wholly neglect an adjunct to the bath, which with them was universal, I mean friction. It would be well if we went back in this matter, in a great measure, to the practices of antiquity. Nothing can serve better to preserve the healthful condition of the skin, the freedom of its circulation, and the due performance of its functions, than frequent ablution and friction.

Dr. Day recommends, "that the surface of the body be rubbed by an attendant until a thorough glow is established. In cases where the debility is too great to admit of a regular bath, as, for instance, when reaction cannot be easily produced, friction must be had recourse to. I regard it as a most important auxiliary to medical treatment, and it is strange that when its therapeutic value is so clearly demonstrated in the writings of the ancient physicians, and is daily exemplified in the sleek skins of our horses, we should have allowed so valuable a practice to fall into almost

utter desuetude. Friction may be practised either with the naked hand, with a piece of flannel, or with the flesh brush. To be of real service, the process should be continued for at least half an hour every morning and evening, should be extended not only to the limbs but to the trunk, and especially to the region of the spine, and should be performed by a person properly instructed. In rubbing the abdomen the curve of the hand should accord with the direction of the large intestine; by this simple means we can frequently prevent constipation, and relieve the flatulence that is often so distressing in old age." (*Treatise on the Diseases of Advanced Life,*' p. 38.)

As the substances used may be various, friction may be made an admirable means either of generally stimulating the whole surface of the body, or particular parts only; or (if the great absorbent powers of the skin were properly regarded,) it might be made a ready and powerful means of conveying nutritious or medicinal matters into the system, to a much greater extent than has ever been attempted. This is a large and almost uncultivated field of inquiry, which would well reward the philosophical labourer, for much, very much I believe, may be learned by well-conducted experiments and judicious observation on the value and

importance of the skin, as a means not only of preserving health but also of remedying disease.

The diseases of the skin in the aged are the direct and manifest consequence of the degeneracy of its vascular system—the obliteration of many of its blood-vessels, and of those pores and ducts which give exit to its secretions—the harsh, dry, wrinkled, and discoloured condition so common, if it may not be regarded as in itself a state of disease, is assuredly the cause of painful and dangerous affections. If the blood-vessels of any part be entirely obliterated, and hence the circulation be wholly arrested, that part necessarily dies: and this occasionally occurs in the feet, constituting the disease known as the gangrene of old age; commencing in one or other of the toes, it slowly spreads from toe to toe, to the feet and inwards, until it arrives at a part, the circulation of which is still sufficiently vigorous to preserve its vitality: a line of separation then appears between the dead and living parts, and the former is cast off, (literally rots off,) or, as more frequently occurs, the powers of the constitution succumb, and the individual who has truly been dying by inches, sinks from the fruitless efforts of the constitution to get rid of the dead load.

Prurigo Senilis, an intolerable itching throughout the

body,¹ is one of the most tormenting and irremediable diseases of old age. It appears to arise from a condition of skin in which great nervous sensibility exists, although the blood-vessels are partially obliterated, and the pores and ducts very much so. It is, perhaps, too, connected with a deranged state of the organs of digestion, and is by some writers attributed in a great measure to a diminished action of the kidneys.

Analogous with these affections, we may, perhaps, regard Carbuncle, which is not strictly a disease of the skin, but of the cellular membrane immediately subjacent. It is not peculiar to old age, but occurs then more frequently and is more dangerous than at any other period of life, because the local vitality of the parts is diminished and the restorative power of the constitution less vigorous than at an earlier period. In conclusion, I may state that I regard the important disease considered in the next chapter (*tussis senilis*, the old man's cough) to be intimately connected with, and perhaps largely dependent on, the harsh condition of the skin; a vicarious action seems to be set up in the bronchial tubes to compensate for the absence of perspiration.

¹ Various parts are covered with bran-like scabs, and in one tormenting variety named by systematic writers *Prurigo formicans*, a number of disgusting insects (a kind of lice,) appear on the skin repeatedly, even in spite of the most careful ablutions.

CHAPTER XII.

TUSSIS SENILIS.

A SEVERE chronic cough so commonly occurs in old age that it is well known by the name of the Old Man's Cough. It consists in a diseased condition of the smaller bronchial tubes, continuing often through many years, or getting much better or disappearing in summer, but recurring with increased severity when winter returns ; or it will often prove fatal when, from imprudent exposure to cold, or from any other cause, active inflammation is induced. It is not a curable affection ; and it is probable that any vigorous attempts at cure will rather do harm than good. The continuous and copious expectoration of thick mucus in the catarrhus senilis is to be regarded very much in the same way as the flow of matter from old ulcers, or any other accustomed discharge, as a safety valve to which the system has long been accustomed, and which, although it may be well to control, it would be unwise to remove altogether. It is not improbable that it supplies in some degree the place of the per-

spiratory discharge which the arid and harsh condition of the skin has put an end to.

The disease in its most usual form consists in a thickened subinflammatory condition of the bronchial tubes, which give out large quantities of viscid mucus, obstructing respiration, and inducing violent fits of coughing to get rid of it. During such attacks, the face is flushed, and the veins of the head distended; the sufferer gasps for breath, and catches hold of the nearest object for support and to assist his efforts; he seems in imminent danger of immediate suffocation or of apoplexy. After a time, a portion of thick mucus is detached from the bronchial tube and expectorated; the breathing becomes easier, the vascular excitement goes off, and the patient simply seems a little exhausted by the past efforts. Sometimes spasmodic affections of the bronchial tubes come on, especially on sudden changes of temperature, or on some imprudent exposure to a current of cold air. The paroxysm is then more of an asthmatic character; the patient gasps and pants for breath; there is great constriction about the throat; an open space and free air are sought for; there is not any constriction of the vessels of the head, nor flushing of the face, which is usually pale, nor is there any cough during the continuance of the spasm—indeed, as soon as the patient is able to

cough the attack is over, which thus ends, therefore, either in cough and expectoration or in a profuse sweating.

In such cases, the patient should be especially careful to avoid sudden changes of temperature and the breathing of impure atmosphere. He must abstain from stimulating foods and drinks altogether—from anything which may irritate or inflame the bronchial surfaces, as they are already in a state of chronic disease. This, indeed, is the chief reason why the epidemic influenza is always peculiarly fatal to the aged. The objects to be kept in view both by the patient and his physician are—1st, to allay spasmodic irritation; 2d, to avoid all exciting and irritating agencies; 3d, to do everything slowly and deliberately, and remain as much as possible in a moist, warm, equable atmosphere; 4th, to promote the free and easy discharge of the mucous secretion, and, if possible, to diminish its viscosity and acrimony. This disease is very frequently combined with organic affections of the heart, and they mutually tend to increase each other, the thickened and subinflammatory condition of the tubes and the viscid secretion with which they are filled impeding the freedom of the circulation, whilst the want of uniformity and regularity in the force impelling the blood tends to increase the bronchial disease.

CONCLUSION.

WHAT is the intention of these pages, and what is the conclusion to be drawn from them? Their intent is to show that, at the present time, in this country, the duration of life generally falls far short of that which man is capable of attaining; that the diseases which shorten life are induced either by a faulty condition of organisation, inherited from previous generations, or are the natural results of our own careless or vicious conduct; that any one who has attained a healthy maturity, may materially prolong that period, and avert the accession of decay; and that they who appear inevitably destined to suffer disease, may, for a long time, keep it in abeyance, and when it does appear, may mitigate its evils, and procrastinate a fatal result.

The conclusion which follows is, that as it is much more in man's power than is generally believed to lengthen the period of his life and to preserve health and vigour throughout its course, the study of hygienic laws is the duty of every individual, and will be rewarded by good results. They who do

this, will assuredly be happier as they become healthier, and duly appreciating their condition, be desirous of extending it to others, by urging on the legislature the necessity for adopting sanatory regulations. Let all those things which tend to injure health be forbidden by law, such as cesspools, and all other accumulations of filth and of decaying animal and vegetable matters; let a full and complete drainage be established everywhere; let inoculation with small-pox be forbidden; let two of the greatest requisites to health, good water and pure air, be most abundantly supplied, to effect these ends: let the supply of water everywhere be unlimited and continuous; let public conduits or fountains be built in many places; let narrow streets, blind courts, and crowded houses, be forbidden, and let open spaces be devoted for the exercise and recreation of the people in many parts of every town; let quackery and the sale of its nostrums be either entirely suppressed by law, or so regulated, that it shall openly avow what it is, and not mislead the ignorant or the unwary by pretending to be that which it is not; and lastly, let the purity of all articles publicly sold as food or as medicines, be assured by the appointment of inspectors, armed with proper authority.

If a complete system of public Hygiene were esta-

blished, pestilential and epidemic diseases would cease to appear ; a wise physical as well as moral training in early youth would be universal, and would gradually eradicate hereditary faults of organisation, and thus, by a combination of wise legislation on the part of the government, and of prudence and obedience on the part of the people, the nation might be rendered more healthful, more vigorous, more virtuous, more happy. Oh, may this soon be ! May this great country, distinguished as it is in arms and arts, the queen of commerce, the home of freedom, the refuge of the oppressed, become remarkable for healthfulness, even in its crowded cities and manufacturing towns ! May her inhabitants be distinguished alike by the perfection of their physical development, the completeness of their mental powers, and the purity of their moral conduct,—a model for the admiration and imitation of mankind—a free, a healthful, and a happy people !

A P P E N D I X.

It may, perhaps, be objected to the following tables, that their accuracy cannot be relied on, and that there is not any authority for many of the instances. I have in the notes appended such authorities as I have been able to find. Where none is quoted, the name has been taken from Mr. Easton's book on '*Human Longevity*', published at Salisbury in the year 1799. Any of my readers will confer a favour by communicating to me instances of longevity above 100 years, which may have fallen under their observation, or of which they may have heard from good authority, and they will add to the obligation by appending any particulars of habit, mode of life, &c., which they may be able to obtain; thus aided I may, perhaps, be able at some future time to print Tables of long lives, more full, accurate, and useful.

TABLE I.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1	L. Carnaro	Nobleman	Italy	1566	104
2	Hastings	Gentleman	England	1650	100
3	Francis Woodwath		"	1662	102
4	Mary Allisson		"	1668	108
5	Th. Wiggin		"	1670	108
6	Glysson	Physician	"	"	100
7	S. Rumbold		"	1687	105
8	J. Moorze	Ironmonger	"	1698	104
9	R. Bristow		"	1731	105
10	Tryconnel	Duchess	Ireland	"	104
11	Rachl. de Biehois	Lady	Franee	1710	107
12	Eaton	Gentleman	England	1731	107
13	J. Anderson		Scotland	"	108
14	J. Finch	Trader	England	1732	104
15	James Simpson		"	"	106
16	Cotsworth	Watchmaker	"	"	100
17	Susanah Beherns		"	"	106
18	Mrs. Bayles		"	"	108
19	Cath. Bayles		"	"	102
20	Ann Kenny	Spinster	"	1733	110
21	Jane Harrison		"	"	105
22	J. Whitfield	Knight	"	1734	101
23	B. de Courcy	Gentleman	"	"	100
24	W. Thurrend		"	"	105
25	J. Lewis	Knight	"	"	104
26	T. Simpson	Park-keeper	"	"	100
27	J. Bennett		"	"	109
28	Mary Damis	Pauper	"	1735	106
29	J. Stanley	Captain	"	,	102
30	J. Willson		"	"	100
31	Jane Woolridge		"	1736	110
32	Wakefield	Physician	"	"	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
33	E. Wallace	Lawyer	Scotland	1736	101
34	J. Baxter		England	„	101
35	R. Friers		„	„	103
36	H. Morgan		„	1737	105
37	E. Curby	Gent.	„	1738	106
38	J. English		„	„	100
39	T. Wood	Parish Clerk	„	„	106
40	Jane Edmunds		„	„	105
41	C. Rustian	Servaut	Sweden	1739	108
42	Smith	Apothecary	England	„	100
43	T. Bond	Sailor	„	„	105
44	Davis	Trader	„	1740	110
45	Thompson	Captain (N.)	„	„ „	102
46	Jane Pimm		„	„	105
47	Jane Eyre		„	„	104
48	Magt. Finch	Queen of Gipsies	„	„	109
49	Ann Grindall		„	1741	104
50	W. Hodges		„	1742	102
51	Jane Nevill	Noble Lady	„	1743	100
52	Agnez Milbern	Pauper	„	„	106
53	Webb		„	„	100
54	Horn	Grocer	„	„	102
55	— Lavington		„	„	106
56	Jane Dowse	Sextoness	„	„	100
57	Bright		„	„	105
58	W. Price		„	„	105
59	Brown		„	„	108
60	Norman		„	„ „	102
61	Dewell		„	„	104
62	J. Stroud	Farmer	„	1746	107
63	H. Featherstone	Knight	„	„	100
64	J. Cuppage	Steward	„	1747	104
65	H. Rogerson		„	„	102
66	Jane Morss		„	„	101

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition	Country.	Died.	Age.
67	L. Ayres	Merchant	England	1748	102
68	J. Colthurst	Clerk	"	"	105
69	Jane Adamson		"	"	104
70	Cressett	Farmer	"	1749	104
71	S. Bliss		America	"	102
72	L. D'Acunha	Nobleman	Portugal	"	105
73	Alice Atkinson		England	"	109
74	E. Willis	King's Page	"	"	101
75	La Costa		"	1750	106
76	Disdale	Weaver	"	"	103
77	Mrs. Scott		"	"	105
78	E. Colville		"	"	105
79	Longworthy	Carrier	"	"	103
80	M. Street	Saddler	"	"	101
81	Jane Vaughan		"	"	105
82	Mrs. Braidford		Scotland	"	109
83	E. Palmer	Trader	England	1751	102
84	Mrs. Wharton		"	"	108
85	J. Newton	Warehouseman	"	"	100
86	N. Whittle	Manufacturer	"	"	103
87	Barnwell	Major	"	"	110
88	R. Mc'Nish		Scotland	"	110
89	J. Witten	Weaver	England	"	102
90	W. Kingsfutt		"	"	101
91	J. Chambers	Fisherman	"	"	100
92	Mrs. Carpenter		"	"	102
93	H. Townson		"	"	100
94	Bridget, wife		"	"	100
95	Elias Lane		"	"	110
96	C. Crook		"	"	102
97	Clara Edei		Scotland	"	105
98	W. Owen	Parish Clerk	England	1753	108
99	Mary Jenkins	Pauper	"	"	110
100	Mrs. Warren		"	"	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
101	Margaret Hunter		England	1753	104
102	Margaret Platinet		France	„	108
103	Janet Gordon		Scotland	„	101
104	Mr. Hobbs	Gardener	England	„	107
105	John Lensing	Sailor	Scotland	„	104
106	Mrs. Smith		England	„	100
107	Elizabeth Andrews	Pauper	„	„	100
108	Mr. Curtis	Fishmonger	„	1754	102
109	Mr. Braithwaite	Clergyman	Scotland	„	110
110	Rebecca Tullock		„	„	105
111	Jane Laycock		England	„	106
112	Mary Blancherd		France	„	104
113	Judith Banister		England	„	108
114	Mrs. Moore		„	1755	104
115	James Wilend		Ireland	„	108
116	Mathew Reid		England	„	104
117	Thomas Marshall	Drummer	„	„	106
118	Sarah Baker		„	„	106
119	Mrs. Haywood		„	„	100
120	Elizabeth Jones		„	„	102
121	Elenora Morgan		Ireland	„	105
122	Patrick Grant	Baronet	Scotland	„	101
123	James Berry	Clerk	England	„	103
124	Mrs. Cushing		„	„	104
125	John Munton	Pauper	„	1756	101
126	Henry Collingwood		„	„	105
127	Major Wilkins	Soldier	„	„	100
128	Richard Hughs	Clergyman	Ireland	„	107
129	Thomas Palliser		„	„	107
130	Henry Le Strange	Gentleman	England	„	107
131	Mr. Northwaite	Clergyman	„	„	107
132	Mr. Netherton	Gentleman	Ireland	„	110
133	Mrs. Lauther		England	1757	106
134	Mrs. Taylor		„	„	103

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
135	James Paysart	Clerk	England	1757	107
136	Mrs. Pilkington		"	"	107
137	Neil M'Cloie		Scotland	"	107
138	Mr. Dobson		England	"	104
139	Mrs. Fletcher		Scotland	1756	109
140	Ann Grey		England	"	107
141	John Stokes		"	"	100
142	John Effengham	Soldier	"	"	104
143	Bernard de Fontinelle	Author	France	1757	100
144	Edward Abbott		England	"	104
145	John Sheepherd		"	"	109
146	Richard Wailes		"	"	100
147	James Wilson		"	"	100
148	Mary Davis	Pauper	"	1758	104
149	Mrs. Mathews		"	"	104
150	John Lucombe		"	"	105
151	James Graham	Sailor	"	"	102
152	James Stewart		Scotland	"	105
153	Mr. Tudor		"	"	104
154	Nathaniel Whiley		Ireland	"	106
155	Elizabeth Harrison		England	"	104
156	John Dartelle	Gardener	France	"	110
157	John Sloane		Ireland	"	100
158	Rachael Solomons		Holland	1759	108
159	Mr. Biddle	Shopkeeper	"	"	100
160	John Bristoe		"	"	100
161	Lady A. de Sempe		France	"	103
162	Eve Schallerm		Lusatia	"	106
163	Elizabeth Owen		Wales	"	106
164	Edward Murphy		Ireland	"	110
165	Alexander Stevens		Scotland	"	108
166	Janett Harper		"	"	107
167	Catherine M'Kenzie		"	"	103
168	William Barnes	Servant	Ireland	"	109

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
169	Mrs. Savory		England	1759	104
170	Mary Hale	Sextoness	„	„	105
171	Elizabeth Giffin		„	1760	101
172	James Grist	Farmer	„	„	108
173	William Wright	Labourer	„	„	105
174	Sarah Taylor		„	„	107
175	John Jung		Zealand	„	106
176	Henry Burbie		Ireland	„	107
177	Sarah White		England	„	106
178	Elizabeth Hodgson		„	„	110
179	Alexander Roche	Soldier	Ireland	„	110
180	Amelia Butler	Lady	England	„	100
181	Jane Grey		„	„	109
182	Jane Wilkes		„	„	101
183	Mrs. Clifton		„	„	103
184	William Masfield		America	„	102
185	Charles Broomgood	Physician	France	„	103
186	Henry Saunders	Farmer	England	„	106
187	A. Hopgood	Farmer	„	„	101
188	Ann Taylor		„	„	101
189	Klantz		Lusatia	„	104
190	His Wife		„	„	102
191	Elizabeth Williams		England	1761	103
192	Jane Atkins		„	„	100
193	Mrs. Dallet		France	„	103
194	James Bemerteau		„	„	105
195	Sarah Hooper	Spinster	England	„	105
196	Isaac Duberdo		„	„	108
197	Pat. M'Ewan		Scotland	„	109
198	Peter Champagne		France	„	100
199	W. Bruguier		„	„	103
200	Jos. Stanly		England	„	106
201	R. Arnott		Scotland	„	100
202	Jas. Jacquimot		France	„	107

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
203	Edward Wilkes,		America	1761	109
204	Mrs. Norton		Ireland	„	109
205	John Rae		England	„	110
206	E. Moore	Sailor	„	„	100
207	Mary Fox		„	„	101
208	Eliz. Wilcox		„	„	104
209	Cornelins Newton		„	„	103
210	Durant du Paix		France	„	105
211	James Cartwright		Scotland	„	110
212	R. Aylmer	Captain	Ireland	„	102
213	Isaac Thornton		England	„	—
214	Henry Fleet		„	„	106
215	John Williamson		„	„	101
216	Ann Waite	Pauper	„	„	106
217	Mrs. Rogers		„	„	107
218	Francis Watkins		Wales	„	102
219	Jane Prudhomme		France	„	103
220	Mrs. Post		England	„	105
221	S. Auber		France	„	106
222	Barbe Semperin		Austria	„	106
223	Jane Lindow		Jersey	„	109
224	James Saxby		England	„	109
225	Mrs. Caleb		„	„	106
226	Mrs. Roberts		Wales	„	107
227	Peter Campbell		Scotland	„	108
228	Francis Atkins	Porter	England	„	104
229	Bertrand de Pui		France	„	109
230	W. Maple	Gentleman	Ireland	1762	101
231	John Ryder		„	„	110
232	Thos. Dixon		England	„	108
233	Jos. Rogers		I. of Man	„	103
234	Eliz. Pearey		England	„	104
235	Robert Lawrence		„	„	100
236	Mary Punch		„	„	105

APPENDIX.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
237	Eliz. Story		England	1762	103
238	Mrs. Robertson		"	"	107
239	Mrs. Knight		"	"	100
240	Agnes Christey		Scotland	"	104
241	Mrs. Baker		England	"	101
242	Thos. Batker		"	"	101
243	Mr. Stevens		"	"	102
244	— Leggatt		"	"	100
245	Timothy O'Mara		Ireland	"	100
246	Mrs. Pope		England	"	106
247	Mrs. Hill		"	"	100
248	Donald McDonald		Aix-la-Ch.	"	110
249	Jane Bunlow		Germany	"	109
250	Thomas Shortall	Colonel	Ireland	"	104
251	Actemar		France	"	106
252	Barned	Tradesman	England	"	102
253	Alexander Fatio		Switzerld.	"	104
254	Crook	Clergyman	England	1763	100
255	Mrs. Halford		"	"	110
256	Mr. Hill		"	"	103
257	„ Blocksop		"	"	103
258	„ Herron		"	"	103
259	Fontaine		Switzerld.	"	103
260	Eliz. Sumner		England	"	102
261	Ann Ashton		"	"	103
262	Wicksted	Farmer	"	"	108
263	Richard Teesdale		"	"	103
264	Peter Campbell		Scotland	"	108
265	Evan Owens		Wales	"	100
266	Mrs. Esch		England	"	100
267	Thos. Jackson		"	"	104
268	Mrs. Blakesley		"	"	108
269	Mr. King		"	"	103
270	Margaret Krasiowna		Poland	"	108

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
271	Mrs. Nicholson		England	1763	106
272	Lady Clinton	Lady	"	"	103
273	Rachael Wetherby		"	"	110
274	William Pickworth		"	"	102
275	John Baxant		"	"	102
276	John Bates		"	"	103
277	Hopgood	Farmer	"	"	101
278	Jos. Barton		"	"	106
279	Edw. Wilks		"	"	109
280	Celia Simms		"	"	107
281	Eliz. Club		Ireland	"	100
282	John Waters		England	"	100
283	Jane Grey		"	"	100
284	Mary Iles		"	"	104
285	Mary Fox		"	"	101
286	De Wessenstein	Baron	Germany	"	100
287	Goring	Grazier	England	"	102
288	G. Wilson		"	"	104
289	Thos. Hopgood		America	"	100
290	Jane Owen		England	"	101
291	John Brown		Ireland	"	109
292	Mr. Hill		England	"	103
293	Mary Gummersall		"	"	107
294	James Baker		"	"	106
295	Mrs. Blasgrave		"	1764	106
296	Eliz. Cave	Matr. of Workh.	"	"	100
297	William Taylor		"	"	102
298	James Wark		Ireland	"	106
299	Eliz. M'Neil		"	"	107
300	Eliz. Greeig	Beggar	Scotland	"	109
301	Mrs. Smith		England	"	100
302	Alice Foot		"	"	100
303	Joseph Rogers	Soldier	"	"	103
304	Margaret Cooper		Scotland	"	105

APPENDIX.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
305	Faith Ginger		England	1764	108
306	Eliz. Elsden		"	"	106
307	Mary Redmond		Ireland	"	103
308	Johanna Freeman		England	"	107
309	Ephraim Randall		"	"	109
310	Susan Devon		"	"	104
311	Christopher Xemines		Spain	"	110
312	Mrs. Morgan		England	"	100
313	Mrs. Martin		"	"	100
314	Mr. Stephenson		"	"	101
315	— Locke		"	"	100
316	Mary Francis		"	"	102
317	Ellenor Hunt		"	"	103
318	Mrs. Pelican		Ireland	"	105
319	Mrs. Carter		"	"	104
320	Mr. Pring		England	"	102
321	Robt. Mayber	Bachelor	"	"	104
322	John Rudge		"	"	107
323	Mrs. Ann Hart		"	1765	102
324	Janet Anderson		"	"	102
325	Joseph Famagello		Italy	"	103
326	Eliz. Holme	Pauper	England	"	104
327	Louisa Villeit		France	"	105
328	John Dowse		England	"	106
329	Mary Andrews	Pauper	"	"	107
330	Mary Benbow		"	"	103
331	Mrs. Lamb		"	"	100
332	Ann Wilson		"	"	110
333	Decre	Clergyman	Wales	"	102
334	Mrs. Deverell		England	"	105
335	John Edwards	Ploughman	"	"	105
336	Jaspar Dixon		"	"	103
337	Mr. Plackett		"	"	102
338	Thos. Gibbon		"	"	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
339	John Buckley	Brazier	England	1765	102
340	Hugh Martin		"	"	109
341	Mrs. Burton		Ireland	"	100
342	-- Carter		England	"	101
343	Margaret Green		"	"	102
344	Mr. Southby	Gardener	"	"	102
345	Mrs. Allen		"	"	103
346	James Talbot		"	"	105
347	John Dickson		"	"	102
348	Jane Hogarth		"	"	106
349	Jane Thompson		"	"	108
350	Jane Fordyke		"	"	102
351	Mrs. Carter		Ireland	"	104
352	Mr. Gaulteer		England	"	102
353	Eleanor Anderson		"	"	107
354	Mr. Glover		"	"	104
355	W. Whitchurst	Soldier	America	"	107
356	Wellener	Butcher	England	1766	101
357	Judith Revertty		Ireland	"	110
358	W. Cribbage		England	"	100
359	Dorothy Frost		"	"	105
360	John Powell		"	"	105
361	Mrs. Day		"	"	104
362	Sarah Butters		"	"	100
363	John Heather		"	"	105
364	Jane Eyles		"	"	106
365	Ann Armstrong		"	"	107
366	Margaret Hemmes		"	"	101
367	Christopher Schröder	Soldier	Germany	"	106
368	Frances Mazzini		Italy	"	105
369	Mrs. Adams		England	"	104
370	James Moxley		"	"	100
371	Capt. Butler	Soldier	"	"	103
372	Mrs. Gray		"	"	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
373	John Haynes		England	1766	105
374	Ann Arnold		"	"	102
375	Alexander Robertson		Scotland	"	107
376	Eleanor Price		England	"	108
377	Sarah Chappell		"	"	104
378	Judith Parker		"	"	103
379	Margaret Thomas		"	"	105
380	John Robinson		"	"	103
381	Magdaline Reston		Italy	"	110
382	— Williamson	Gentleman	England	"	102
383	Mary Jones		"	"	102
384	Solomon Emanuel		Hungary	"	109
385	Pheneas Monseca		Algiers	"	109
386	Margaret Bartlemer		England	"	102
387	Mrs. Hunter		"	"	109
388	Jane Fordyke		"	"	102
389	Hickford	Clergyman	"	"	100
390	Mary Cantleof		"	"	104
391	Mrs. Newman		"	"	105
392	Mrs. Goosetree		"	"	104
393	Richard Matherman		"	"	102
394	Margaret Pullen		"	"	100
395	Roger Dove		"	"	102
396	Mrs. Dove		"	"	100
397	Mrs. Frost		"	"	105
398	Saalsfield	Clergyman	Ireland	"	106
399	Palwell		England	"	105
400	Ann Johnson		"	"	102
401	Ann Jones	Pauper	"	"	104
402	Ann Gilbert		"	"	104
403	Mary Humphrey		"	"	102
404	James Lindsey	Soldier	"	"	103
405	Ann Blakesley		"	"	102
406	Ann Williams		"	"	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
407	Daniel Pratt		England	1766	102
408	Mrs. Simmons		"	"	107
409	Jane Robins		"	"	100
410	Mary Wiggins		"	1767	109
411	Mary Holt		"	"	108
412	Thades Hynes		Ireland	"	105
413	John Wood		England	"	102
414	Mary Beelby		"	"	107
415	John Richardson		"	"	101
416	Eliz. Fennell		"	"	100
417	G. Gibbons		"	"	104
418	Mrs. Tate		"	"	102
419	Jane Egerton		"	"	103
420	Mrs. Pymm		"	"	100
421	Cockey		"	"	100
422	Jane Staples		"	"	106
423	Eliz. Mason		"	"	104
424	John King		"	"	105
425	Nicholas Dufrenois		France	"	101
426	Patterson	Clergyman	England	"	100
427	Passarini	Baroness	Italy	"	108
428	John Mitchell		England	"	100
429	René de Tressonier		France	"	103
430	Jane Wilson		England	"	101
431	Mathard	Surgeon	"	"	102
432	Peter Stuart		Scotland	"	103
433	John Ubers	Printer	Holland	"	106
434	Gerrard Lamb		Madras	"	103
435	Mrs. Waters		England	"	103
436	Lady Dupin	Noble Lady	France	"	101
437	Poor Joe All-Alone	Pauper	England	"	105
438	Edward Norris	Sailor	America	"	103
439	Benjamin Perrin		England	"	103
440	Mrs. Darby		"	"	105

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
441	Mrs. Fulcher		England	1767	100
442	John James		"	"	101
443	John Haynes		"	"	105
444	Downes Twyford	Gentleman	"	"	100
445	Robert Forrest		"	"	100
446	Eliz. Parker		"	"	103
447	George Wilford		"	"	100
448	David Chambers	Weaver	"	"	100
449	Mary Thomas		"	"	102
450	W. Massenger	Mechanic	"	"	102
451	W. Rogers		"	"	105
452	John Saunders	Pauper	"	"	107
453	His Wife		"	"	105
454	John Wood		"	"	100
455	Mrs. Price		"	"	107
456	Martin Fountain		"	"	110
457	George Moore	Shoemaker	"	"	110
458	Mary Simmonds		"	"	106
459	Mary Bate		"	"	104
460	Gerrard Brusel		Madras	"	103
461	John Forster		England	"	101
462	James Fraser		Scotland	"	104
463	Thos. Johnson		England	"	105
464	Eliz. Harwood		"	"	102
465	Mrs. Heckins		"	"	100
466	Margaret Thomas		"	"	105
467	Thomas Probin		"	"	103
468	Mary Tuftin		"	"	109
469	Alice Dunn		Ireland	1768	102
470	Philip La Rogue		France	"	102
471	Jane Holt		England	"	108
472	Sarah Pinson		"	"	106
473	Robert Anderson		Scotland	"	100
474	Thos. Horne		England	"	107

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
475	Conolly		Ireland	1768	107
476	Sol. Humphries	Pauper	England	„	106
477	Col. M'Namara	Colonel	Ireland	„	102
478	P. Maquire	Merchant	England	„	107
479	John Pearse	Farmer	„	„	103
480	Peter Magee		„	„	102
481	Arthur Jackson	Ploughman	„	„	107
482	Martin Riley	Barber	„	„	104
483	Jacob Garton	Tallow Chandler	„	„	102
484	Ralph Howe		„	„	103
485	Samuel Urwin	Naval Officer	„	„	104
486	John Drewett	Merchant	„	„	101
487	Mary Prescot		„	„	105
488	John Daniel	Ironmonger	„	„	107
489	Height		„	„	100
490	Mary Elder	Pauper	„	„	102
491	Phillibert du Chateau	Soldier	France	„	103
492	Henry Felton	Farmer	England	„	102
493	Mrs. Caulers		„	„	101
494	George Bowman		Scotland	„	107
495	Sarah Pomfrey		England	„	103
496	Mrs. Coleman		„	„	106
497	Edward White		Scotland	„	108
498	Riley		England	„	100
499	Oliver Eustace		Ireland	„	100
500	Peter Dowling	Sailor	England	„	102
501	Ann Barthelems		France	„	110
502	Marie Tardie		„	„	105
503	Margaret M'Dowal		Scotland	„	106
504	Phillip Loutier	Barber	France	„	105
505	Cornelius van Dieman		Holland	„	105
506	Philip Palfreeman	Boxkeeper	England	„	100
507	Laughlin M'Gillawry		Scotland	„	107
508	John Lindsay		England	„	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
509	John Cotterill		England	1768	102
510	Dominick Ryley	Soldier	"	"	101
511	Thomas Crosby	Clerk	"	"	103
512	Jacob Gerton		"	"	102
513	John Disney	Clerk	"	"	100
514	Susannah Pratt		"	"	109
515	James Casslet	Groom	"	1769	104
516	John Brooksbank	Sailor	"	"	102
517	Jonathan Pulleyn	Naval Officer	"	"	100
518	Mrs. Moore		"	"	107
519	Ann Richards		"	"	103
520	Mrs. Goodluck		"	"	108
521	Mary Baker		"	"	100
522	Bridget Toole		Ireland	"	103
523	Conyers	Fisherman	England	"	105
524	Thomas Trevanion			"	107
525	W. Wells			"	104
526	Horner			"	106
527	H. J. Oswal		France	"	105
528	Jane Hallett		England	"	107
529	Robert Sellen		"	"	100
530	John Wheeler		"	"	105
531	Mrs. Clarkson		"	"	105
532	Peter Breman	Soldier	"	"	104
533	Elizabeth Harwood		"	"	102
534	Mrs. Talbot		"	"	105
535	Honor M'Mahon		Ireland	"	110
536	James Palmor	Fisherman	England	"	106
537	Mrs. Day		"	"	106
538	James Sibbon	Ship-Carpenter	"	"	105
539	George Welling	Wheelwright	"	"	102
540	Richardson		"	1770	102
541	Mr. Jackson	Gentleman	"	"	100
542	Madame Genevieve		France	"	105

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
543	Mary James		England	1770	100
544	Patronella Picht		"	"	100
545	Ellen Brandwood		"	"	102
546	John McDonald		"	"	108
547	Eleanor Lawson		"	"	105
548	Francis Morris		"	"	108
549	Perrette Chualon		"	"	106
550	James Hatfield	Soldier	"	"	105
551	Sarah Deson		"	"	103
552	John Storey	Gardener	"	"	105
553	Ann Hatfield		"	"	105
554	Ralph Nied		"	"	107
555	Mr. Jefferies	Farmer	"	"	104
556	Ramsay	Shopkeeper	"	"	105
557	Jane Hammond		"	"	107
558	William Morley	Farmer	"	"	103
559	Mr. Mills		"	"	100
560	Mary Johan		Belgium	"	108
561	Philip Car		England	"	105
562	Mdme. de Deisbaek	Princess	Switzerld.	"	104
563	Jane Morse	Pauper	England	"	105
564	Isabella Sidonie	Baroness	Hungary	1771	101
565	Wellings	Clothier	England	"	109
566	G. Thomlinson		"	"	104
567	Mrs. Barton		"	"	103
568	J. Johnson	Captain	"	"	102
569	William Cotterell	Farmer	"	"	107
570	Thomas Ledear		"	"	103
571	Euring	Gardener	"	"	105
572	Mrs. Probe		"	"	104
573	Mrs. Boyce		"	"	107
574	N. Wickfield		"	"	103
575	Mary Bird		"	"	100
576	Mary Agar		Ireland	"	106

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country	Died.	Age.
577	Pratt	Clergyman	England	1771	102
578	Dickie		Scotland	„	109
579	J. Merryweather		England	„	105
580	R. Coulson		„	„	107
581	T. Wilson	Naval Captain	„	„	103
582	Elizabeth Gordon		Scotland	„	100
583	Paul Barral	Priest	Italy	„	106
584	Mr. Mullilet		England	„	108
585	A. Jones	Shepherd	Wales	„	107
586	Peter Guthrie		Scotland	„	105
587	Solomon Emanuel		Holland	„	109
588	John Hammond		England	„	107
589	J. A. Tompkins	Naval Captain	„	„	103
590	I. Naish	Farmer	„	„	104
591	John Allen		„	„	104
592	John Miles	Labourer	„	„	109
593	Thumull	Professor	Germany	„	104
594	Sol. Levy		England	„	108
595	Mrs. Chandler		„	„	108
596	Mrs. Redrick		„	„	105
597	Elizabeth Atkinson		„	„	105
598	Margaret Coles	Beggar	„	„	102
599	Henry Morgan		„	„	107
600	Ann Franks		„	„	100
601	Mrs. Sholmine		„	„	103
602	Andrew Coppach		France	1772	105
603	Mrs. Day		England	„	107
604	Susannah Vandewall		„	„	106
605	Mrs. Coulter		Scotland	„	103
606	Mrs. Summers		England	„	102
607	Thomas Dalton		„	„	105
608	John Simpson		„	„	110
609	Margaret Austen		„	„	104
610	W. Giles		„	„	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
611	James Geras		Switzerld.	1772	109
612	Mary Gray	Pauper	England	„	103
613	Peter Mauzere	Fisherman	Holland	„	109
614	Jane Simmonds	Pauper	England	„	110
615	Mr. Jones		„ „	„	108
616	Mr. Cordelon		France	„	107
617	Jas. Gay		„	„	101
618	Elizabeth Nichols		England	„	103
619	A. Draysdall	Gardener	Scotland	„	107
620	Mdme. Grandchamps	Nun	France	„	107
621	Jane Shirley		England	„	102
622	Joan Jones		„	„	103
623	R. Creed	Naval Captain	„	„	110
624	W. Harwick		„	„	100
625	John Richardson		„	„	107
626	Mary Butler		„	„	102
627	Mary Metcalf		„	„	108
628	Mrs. Tate		„	„	106
629	J. Jenkins	Merchant	„	„	106
630	John Meggs		„	„	101
631	Jane Jenkins		„	„	108
632	P. McDonald	Fisherman	Scotland	„	109
633	Daniel Legro		England	„	103
634	Maria Watson		„	„	104
635	Peter M'Cloud		„	„	105
636	Isabel King		Scotland	„	108
637	Mr. Hamilton		England	„	101
638	Mary Winter		„	„	105
639	Mary Simms	Beggar	„	„	109
640	Mr. Shephard	Gardener	„	„	109
641	E. Page		„	„	108
642	James Newnham	Officer	„	1773	102
643	Mrs. Cooper		„	„	104
644	Elizabeth De Vall		Flanders	„	101

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
645	Henry Junkerman		France	1773	108
646	Thomas Frowd		England	"	103
647	Major Astle	Major	Ireland	"	100
648	Elizabeth Clarke		England	"	104
649	Joan Godfrey		"	"	110
650	Steward	Farmer	"	"	103
651	W. Dykes	Draper	"	"	103
652	David Worsam	Factor	"	"	109
653	Jane Reeves		"	"	103
654	Mr. Hales		"	"	104
655	Peter Delme		"	"	104
656	J. Halliday	Knight	"	"	102
657	T. Garbut		"	"	101
658	P. Bennet	Soldier	"	"	107
659	Mary Smith		"	"	104
660	Mrs. Leavesfield		"	"	107
661	Martha Collins		"	"	102
662	Mary Duff		"	"	103
663	James Kealing		"	"	103
664	Ann Welder		"	"	107
665	John Jones		"	"	102
666	T. Forbes	Naval Captain	"	"	102
667	F. Gresby	Clergyman	"	"	100
668	Rachael Solomon		Holland	"	110
669	S. Connannel		"	"	109
670	A. Eckstain		England	"	106
671	Mr. Ralf		"	"	103
672	Mary Jones		"	"	100
673	J. Cordelen		France	"	108
674	Mr. Long	Farmer	England	"	102
675	Mary Worsley		"	"	105
676	Gatty	Tailor	"	"	104
677	Eyre	Cutler	"	"	107
678	Torreson Sologsteen	Peasant	Norway	"	100

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
679	His Wife	Peasant	Norway	1773	100
680	Jern Oer		"	"	100
681	His Wife		"	"	100
682	Ole Bessebar		"	"	100
683	His Wife		"	"	100
684	Hans Forlasken		"	"	100
685	Joran Gallen		"	"	100
686	Samuel Street	Soldier	England	1774	102
687	I. Devick	Merchant	"	"	105
688	M. Pravie	Baronet	Scotland	"	101
689	Eliza Tuck		England	"	103
690	B. Smith	Naval Capt.	"	"	104
691	Isaac De Vic		"	"	102
692	Robert Hill		"	"	101
693	Eliz. Greaves		"	"	100
694	Jane de Quincarnou	Baroness	France	"	106
695	John Whitton	Labourer	England	"	107
696	Rachael Munns		"	"	107
697	Z. Abington		"	"	103
698	Bulkley	Noble Lady	"	"	102
699	O. Tersenny		Ireland	"	107
700	Turtle		England	"	102
701	John M. Morgan	Gentleman	"	"	100
702	John Smith		"	"	108
703	T. Willoughby	Thatcher	"	"	107
704	P. Frampton		"	"	107
705	Lidia Hewett		"	"	107
706	Martha Gibbons		"	"	107
707	Mazarella	Gentleman	Germany	"	105
708	Prudence Hudson		England	"	107
709	Bridget Howard		"	"	101
710	Mrs. Wye		Ireland	"	105
711	Sarah Duffield		England	"	103
712	John Laysc	Captain	"	"	106

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
713	Isaac Warnford	Farmer	England	1774	103
714	E. Smithson		"	"	101
715	Gunwell		"	"	108
716	Thomas Miller		"	1775	101
717	F. Tait		Scotland	"	102
718	Mary Watkins		England	"	105
719	Sarah Brookman		"	"	106
720	J. Howes		"	"	106
721	M. M'Laughlin		Ireland	"	108
722	Mrs. Buchy		"	"	103
723	Sir G. Hawkins	Physician	England	"	105
724	A. Maxwell	Doctor	"	"	103
725	Warne	Engraver	"	"	103
726	—	Farmer	Wales	1776	105
727	Eleanor Willis		England	"	105
728	Mr. Dormer		"	"	106
729	G. Goodman		Jamaica	"	105
730	Mrs. Cahier		England	"	108
731	R. Cook		"	"	107
732	Lathwaite	Clergyman	"	"	100
733	B. Price		"	"	104
734	Brooks		"	"	100
735	L. Chambellan		France	"	109
736	Mrs. Hall		England	"	100
737	Kennedy		Scotland	"	110
738	W. Dale		England	"	101
739	Ann Sympson		"	"	101
740	J. Dobyns	Shepherd	"	"	102
741	Marie Magdaleine		France	"	103
742	Wright		England	"	102
743	Marguerite de Coeg		France	"	104
744	Pattison		Scotland	"	100
745	Mr. Buck		Ireland	"	105
746	J. Harding		England	"	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
747	Willet	Naval Capt.	England	1776	100
748	Margaret Baise		"	1777	107
749	Mrs. Rowe		"	"	106
750	Walker	Clergyman	"	"	107
751	Mary Flowers	Pauper	"	"	102
752	F. Wilks	Labourer	"	"	109
753	P. Fierville	Actor	Germany	"	107
754	D. Lewen		England	"	103
755	Price		Wales	1778	103
756	Purfield		England	"	105
757	William Duncan		Scotland	"	108
758	A. Devaile		England	"	102
759	J. Lambart	Servant	"	"	103
760	T. Cooper	Drummer	"	"	100
761	Husan		"	"	109
762	T. Cocks	Labourer	"	"	102
763	Anna Threlkeld	Pauper	"	"	106
764	Eleanor Neal		"	"	102
765	C. Beresford	Gentleman	"	1779	103
766	J. Strokes	"	"	"	104
767	S. Jacobson		"	"	101
768	J. S. Thornton	Gentleman	"	"	102
769	Wilbraham	"	"	"	101
770	Oaks	Merchant	"	"	107
771	Margaret Doyle		Ireland	"	110
772	A. Forsyth	Shoemaker	Scotland	"	109
773	Mary Langton	Pauper	England	"	108
774	Mrs. Clarke		"	"	102
775	Susan Eveson		"	"	108
776	Mary Grimes		"	"	106
777	D. Bennet		"	"	107
778	F. Pryce		Wales	"	101
779	W. Stainia	Pauper	England	"	101
780	G. Haslem	Soldier	"	"	105

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Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
781	Samuel Johnson		England	1779	104
782	Mrs. Bacon		"	"	100
783	Ann Steyning		"	"	102
784	Mr. Denton		"	"	102
785	Mrs. Brandon		"	"	103
786	J. Ekins	Labourer	"	1780	103
787	H. Wilkinson	Knight	"	"	104
788	Ruth Wine		"	"	104
789	Kirby	Farmer	"	"	104
790	Susannah Wood		"	"	109
791	Mrs. Armstrong		"	"	110
792	R. Kenns		"	"	108
793	S. Pickering	Gentleman	"	"	104
794	Mary Ryan		"	"	107
795	Margaret Wilkinson		"	"	107
796	James Walford	Labourer	"	"	104
797	Mrs. Pollard		"	"	107
798	Mrs. Stoaks		"	"	100
799	E. Shrigley		"	"	102
800	T. Carter	Labourer	"	"	108
801	T. Dickens	Farmer	"	"	105
802	J. Simpson	Gentleman	"	"	104
803	Janet Kynock		Scotland	"	105
804	Mrs. Bullock		England	"	101
805	J. Morrill	Lieutenant	"	"	100
806	J. Stewardson		"	"	102
807	J. Mullet		"	"	103
808	J. Hopper	Labourer	"	"	103
809	D. Bennett		"	"	107
810	Joan Farmer		"	"	107
811	John Bennett	Gentleman	"	"	100
812	Mary Glover	Pauper	"	"	103
813	R. Pring	Farmer	"	"	103
814	T. Pen		"	"	101

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
815	E. Brinton	Shopkeeper	England	1780	102
816	J. Dangerfield	Labourer	"	"	100
817	Mary Smith		"	"	104
818	Mrs. Cooper		"	"	102
819	S. Edmonds		"	"	104
820	Mr. Wheatley		"	"	106
821	Mrs. Noel		"	"	106
822	Janet Taylor		Scotland	"	108
823	J. Codrington	Gentleman	"	"	104
824	Susannah Dashwood		"	"	108
825	T. Field	Labourer	"	"	102
826	J. Thorpe	Farmer	"	"	109
827	Mrs. Clarke		"	"	105
828	Mary M'Kee		Ireland	"	110
829	G. Phillips		England	"	106
830	Mrs. Smith		"	"	104
831	S. Fidler	Labourer	"	"	105
832	T. Keggan		"	"	107
833	G. Kennedy	Physician	"	"	100
834	Mrs. Bellew		Barbadoes	"	108
835	Mr. Sutton		"	"	104
836	Mrs. Jacklew		"	"	101
837	Mary Parker		England	1781	108
838	J. Lutwick	Grocer	"	"	109
839	Elizabeth Dallass		"	"	103
840	Mrs. Loveken		Germany	"	101
841	F. le Grange		France	"	106
842	J. Thomson	Farmer	England	"	103
843	Worme	Imkeeper	"	"	101
844	Mary Speed	Labourer	"	"	103
845	Mary Webb	Pauper	"	"	110
846	Mrs. Carlton		"	"	104
847	Peter Langré		France	"	105
848	C. Hayman	Soldier	England	"	100

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Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
849	P. Linford		England	1781	107
850	Mrs. Ritchie		Scotland	„	110
851	G. Lane	Gardener	England	„	102
852	H. Vaughan	Gentleman	„	„	101
853	Mannington	Attorney	„	„	110
854	Judith Clements		„	„	109
855	P. Housen	Soldier	Germany	„	107
856	T. Shepherd		England	„	108
857	J. Freeman	Com. R.N.	„	„	102
858	Esther Wardlaw		„	„	103
859	D. Bennett	Soldier	„	„	107
860	Helen Gray		Scotland	„	105
861	P. Marier	Fisherman	Holland	„	109
862	Esther Davies	Pauper	England	„	103
863	P. Blakeney	Captain	Ireland	„	104
864	J. Allason		Scotland	„	103
865	Catherine Hales		„	„	109
866	—		Germany	„	100
867	P. Prinn	Glassblower	England	„	101
868	W. Roper		„	„	101
869	J. Brickley	Surgeon	„	„	104
870	R. Butterfield	Mechanic	„	„	102
871	J. Beedel		„	1782	100
872	Stephen Brigg		„	„	110
873	John Nicholls	Labourer	„	„	105
874	C. Amyot		France	„	105
875	J. Winshaw		England	„	107
876	C. Strickland	Gentleman	„	„	102
877	Martens		Holland	„	100
878	J. Isles		England	„	103
879	B. Parker		„	„	103
880	R. Ashley	Gardener	„	„	100
881	Mrs. Tuson		„	„	103
882	H. Moulding	Sailor	„	„	102

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Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
883	John Brown		Scotland	1782	110
884	Jane Child	Pauper	England	„	109
885	H. Lord	Soldier	„	„	106
886	L. Nelson	Clergyman	„	„	103
887	Mrs. Stracey	„	„	„	104
888	Francis Miles	Soldier	„	„	108
889	Mrs. Crouch	„	„	„	103
890	Mrs. Ramscar	„	„	„	106
891	Mrs. Hunchback	„	„	„	100
892	Mr. Frank	„	„	„	109
893	Mordecai	Merchant	Germany	„	103
894	C. Leslie	Ballad Singer	Scotland	„	105
895	Isabel Tough	„	„	„	105
896	Cath. Daubenbulk	Pauper	Flanders	„	107
897	Mrs. Langdale	„	England	„	103
898	R. Nicholson	„	Ireland	„	110
899	Elizabeth Driffield	„	England	„	103
900	Johnson	Cheesemonger	„	„	103
901	Susan Evison	„	„	„	106
902	W. Thompson	„	„	„	108
903	Babara Softley	„	„	„	105
904	Rebecca Wedman	„	„	„	105
905	Tasker	Farmer	„	„	103
906	E. Drinker	„	America	„	103
907	Heidington	Smith	England	„	100
908	A. M'Calvin	Surgeon	Scotland	„	101
909	W. White	„	„	„	102
910	H. Jones	Merchant	Wales	„	104
911	A. Erstain	Butcher	England	„	107
912	Mrs. Simpson	„	„	„	102
913	M. Champney	„	„	„	102
914	Mrs. Appleby	„	„	„	101
915	G. Burgess	„	„	„	105
916	J. Pearce	Labourer	„	„	105

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition	Country.	Died.	Age.
917	Wrench	Gardener	England	1783	101
918	T. Poxton	Quack Doctor	"	"	108
919	Mary Cadenhead		Scotland	"	103
920	James Smith	Farmer	"	"	106
921	Mary Pritchard		"	"	103
922	Signora Cervetto		Italy	"	102
923	J. Sylvester		England	"	107
924	Mary Archambault		France	"	101
925	J. Hamilton	Merchant	England	"	103
926	W. Thompson	Gentleman	"	"	108
927	E. Price	Grazier	Scotland	"	102
928	J. Rogerson		"	"	102
929	Mrs. Boston		"	"	109
930	E. Whiteley		England	"	102
931	W. Briscoe		"	"	101
932	A. Mascarenhas	Slave	Africa	"	110
933	J. Cresy		England	"	102
934	Mary Johnson		"	"	103
935	W. Towson	Soldier	"	"	104
936	Mary Worsley		"	"	105
937	J. Woodgate		"	"	107
938	Susannah Evanstone		"	"	108
939	John Owen		Wales	"	101
940	Mrs. St. John		England	"	102
941	J. Wilson		"	"	105
942	Mrs. Cotes		"	"	101
943	Mrs. Bancart		"	"	100
944	G. Goodwin		"	"	103
945	Mrs. Worsley		"	"	105
946	Elizabeth Clark		Scotland	"	104
947	W. Kirby		"	"	102
948	J. Smith		England	1784	105
949	R. Boon		"	"	102
950	Peck	Musician	"	"	100

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Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
951	W. Stockwood	Clergyman	England	1784	100
952	Mrs. Poore		"	"	108
953	J. Laing		"	"	103
954	Mr. Barrett		"	"	100
955	Jane Pritchard		"	"	103
956	J. Bryan		Ireland	"	107
957	T. Edgar		Scotland	"	108
958	Mrs. Jenkins		Wales	"	102
959	W. Watson	Soldier	England	"	104
960	Elizabeth Jack		Scotland	"	105
961	G. Sims		England	"	102
962	Abigail Sewell		"	"	105
963	P. M'Donaldson	Gentleman	Ireland	"	108
964	Eliz. Taylor		England	"	103
965	Susan Evison		"	"	108
966	M. Jackson		"	"	100
967	Mr. Brook	Mast Maker	"	"	103
968	W. Painter		"	"	104
969	P. Smith		"	"	100
970	Margaret Seurral		"	"	108
971	Gastheim	General	Hungary	"	100
972	D. M'Donald		Scotland	"	109
973	Mrs. Wilkins		Wales	1785	105
974	J. Wigmore	Gentleman	England	"	101
975	R. Warne		"	"	100
976	Maria Moses		"	"	100
977	Hannah Heal		"	"	100
978	C. Jones		Wales	"	105
979	C. Gavin		Scotland	"	103
980	J. Bond		England	"	102
981	Ellen Hinds		Ireland	"	106
982	R. Spencer		England	"	100
983	R. Fuller		"	"	100
984	J. Randolph	Attorney	"	"	107

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
985	Catherine Plumber		England	1785	104
986	Hannah Sparke		"	"	107
987	Mrs. Carr		"	"	100
988	Mary Brown		"	"	102
989	L. Morgan		Wales	"	101
990	W. Auld	Pedlar	Scotland	"	191
991	Smith	Farmer	Wales	"	103
992	Mrs. Watson		England	"	104
993	W. Murray		Scotland	"	100
994	J. Mackie	Farmer	"	"	103
995	De Salis	Cardinal	Spain	"	110
996	W. Wilday		England	1786	101
997	David Solomons	Rabbi	"	"	100
998	C. Blizzard	Farmer	"	"	107
999	Eliz. Curril		"	"	100
1000	Anne Davis		"	"	102
1001	Esther Richardson		"	"	109
1002	C. Studwick	Gentleman	"	"	101
1003	Mrs. Hunter		"	"	106
1004	Mrs. Mason		"	"	100
1005	Eleanor Railston		"	"	102
1006	Isabella Dryden		"	"	105
1007	W. Trundle		"	"	100
1008	Mrs. Smith		"	"	108
1009	L. Pancon	Labourer	France	"	104
1010	Anne Merritt		England	"	107
1011	G. Thomas		Wales	"	108
1012	Eliz. Higton		England	"	107
1013	P. O'Brien	Cooper	Ireland	"	105
1014	J. Ferguson	Farmer	Scotland	"	108
1015	R. Hicks		England	"	104
1016	R. Wilson	Pauper	"	"	100
1017	J. Barnsley	Miner	"	"	101
1018	J. Dodd	Farmer	"	"	100

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1019	J. Ridgeway		England	1786	100
1020	Mary Bailey		"	"	106
1021	Mrs. McCarthy		Ireland	"	103
1022	D. Tearc	Labourer	I. of Man	"	110
1023	G. Buek		England	1787	102
1024	J. Hill		"	"	100
1025	J. Pengs	Labourer	"	"	103
1026	Mrs. Bailey		"	"	105
1027	R. C. Latham		Scotland	"	102
1028	J. Warren	Fisherman	Ireland	"	107
1029	D. Lynch		"	"	101
1030	D. Graham		Scotland	"	108
1031	Jean Patz		Germany	"	109
1032	H. Sedgfield	Sailor	Scotland	"	107
1033	Lucinda Bryan		Ireland	"	108
1034	J. Gilburne	Soldier	England	"	104
1035	D. Herliny		Ireland	"	107
1036	J. Mannell	Farmer	England	"	102
1037	Susan Greenfield		"	"	105
1038	J. Weller	Gentleman	"	"	109
1039	Mrs. Alehorne		"	"	104
1040	W. H. Franklin		"	"	103
1041	E. Gour		"	"	103
1042	Mrs. Pocklington		"	"	105
1043	D. Prim		"	"	104
1044	R. Jenkine		Wales	"	110
1045	Janet Allan		Scotland	1788	105
1046	Mary Warder		England	"	106
1047	Judith de Ligonier		France	"	100
1048	Mr. Cromer		England	"	102
1049	Anne Butler		"	"	107
1050	J. Thomas		"	"	105
1051	M. Drusina	M. Officer	France	"	107
1052	Mademoiselle, jun.	Nun	"	"	102

APPENDIX.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition	Country.	Died.	Age.
1053	De Roser	Baron	Russia	1788	108
1054	Mrs. Mansell		Ireland	„	105
1055	T. Russ		England	„	107
1056	Jane Mulholland		Ireland	„	105
1057	Mary Ram		England	„	107
1058	J. Young	Weaver	Scotland	„	105
1059	Mrs. Hop	Baroness	Holland	„	100
1060	Anne Mallison		England	„	100
1061	Mrs. Lyng		„	„	107
1062	Mary Kershaw		„	„	103
1063	Mrs. M'Ilroy		Ireland	„	101
1064	J. Bryson		„	„	103
1065	R. Johnson		England	„	100
1066	O. Best		„	„	102
1067	G. Moakes	Naval Captain	„	„	107
1068	J. Henniker	Labourer	„	„	101
1069	Mary Wilkinson		„	„	109
1070	P. Coets	Soldier	Flanders	1789	104
1071	T. King	Gentleman	„	„	105
1072	Mary Browne		England	„	104
1073	Mrs. Dawson		„	„	101
1074	Jane Goodwin		„	„	101
1075	Anne Ashe		„	„	104
1076	Mrs. Weldyn		„	„	106
1077	Mrs. Neave		„	„	102
1078	T. Houlcroft		Wales	„	106
1079	A. Meyer		Denmark	„	106
1080	J. Flannagan		Ireland	„	102
1081	Esther Barrow		England	„	105
1082	R. Semple	Gentleman	Scotland	„	106
1083	T. Dyche	Pauper	England	„	102
1084	Capt. Cespedes		Caraccas	„	110
1085	T. Loveday	Blacksmith	England	„	101
1086	B. Pereyra	Fisherman	Portugal	„	107

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1087	Marion Gibson		England	1789	100
1088	P. Flannagan	Limeburner	Ireland	„	104
1089	J. Price		England	„	100
1090	A. Van Rysell		Holland	„	100
1091	Sarah Jones		Ireland	„	102
1092	Frances Barton		England	„	107
1093	E. M'Menemon		Ireland	„	109
1094	W. Troughton		England	1790	102
1095	Mary Jackson		„	„	104
1096	M. Moet	Army	Holland	„	101
1097	Hannah Jenk		England	„	103
1098	Mrs. Dick		Scotland	„	105
1099	Jane Monks		England	„	104
1100	A. Deane	Gentleman	„	„	100
1101	Bridget Seaver		Ireland	„	108
1102	Mary Rose		England	„	101
1103	P. Curtin	Priest	Ireland	„	101
1104	J. Buchanan		Scotland	„	103
1105	Mr. Cross	Domestic	„	„	105
1106	J. Peters	Pedler	„	„	107
1107	Madame Brolard		France	„	101
1108	J. Swarberick		England	„	102
1109	M. Rodez		Poland	„	103
1110	Margaret M'Carthy		Irreland	„	103
1111	Mrs. Todd		England	„	105
1112	J. Coomer		„	„	102
1113	J. Quanbrough		„	„	102
1114	T. James	Gentleman	Ireland	„	100
1115	J. Peale		England	„	107
1116	Mary Tench		Ireland	„	100
1117	Anne Bannerman		Scotland	„	105
1118	J. Plover		England	„	108
1119	I. Hyde		„	„	102
1120	D. Fletcher		„	„	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1121	J. Cree	Farmer	Ireland	1790	107
1122	W. Troughton		England	,	102
1123	Watkins	Noble Lady	Wales	,	110
1124	Macleod	Army	,	,	102
1125	Elizabeth Gibbon		Jamaica	,	100
1126	Mary Burke		England	,	105
1127	Annas Bristo		,	,	102
1128	Davies	Clergyman	,	,	105
1129	J. Pride		,	,	100
1130	Mrs. Loder		,	,	102
1131	A. Deane	Gentleman	,	,	100
1132	Mary Lacey		,	,	102
1133	J. Michiel		Holland	,	101
1134	Anne Pilcher		England	,	103
1135	Mrs. Barry		,	,	103
1136	Sarah Sherdley		,	,	105
1137	A. Clugston	Farmer	,	,	105
1138	I. Hibbits	Labourer	Ireland	,	100
1139	Mrs. Cradock		England	,	102
1140	Mrs. Magee		Ireland	1791	102
1141	Mary Clements	Pauper	England	,	105
1142	Mary Smith		,	,	100
1143	Sarah Gunston		,	,	103
1144	Mrs. Poor		,	,	101
1145	B. Rymer		,	,	100
1146	Mr. Macdonald		Scotland	,	101
1147	Jane Gosnal		England	,	104
1148	Catherine Harvey		,	,	104
1149	Mary Halmshaw		,	,	102
1150	Mary Cousen		,	,	103
1151	W. Billings	Army	,	,	102
1152	Henrietta Martiel		Hanover	,	104
1153	Frances Crossley		England	,	109
1154	W. Brown		Scotland	,	108

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1155	Mr. Winterton		England	1791	101
1156	Bridget Player	Pauper	„	„	102
1157	Rebecca Joseph		Wales	„	100
1158	Mrs. Blake		England	„	100
1159	Anne Thomas		„	„	105
1160	Anne Waters		Ireland	„	104
1161	Don C. F. O'Neale	General	Spain	„	110
1162	Anne Young		England	„	102
1163	Mrs. Wharton		„	„	103
1164	J. Strachan		Scotland	„	105
1165	Sarah Price	Pauper	Wales	„	103
1166	Mrs. Cooba	Negro	St. Elizab.	„	110
1167	Mrs. Askham		England	„	101
1168	Mrs. Rheam		„	„	101
1169	A. Fishpool		„	„	102
1170	J. Sampler		„	„	103
1171	Mary Bealey		„	„	102
1172	A. Dickie		Scotland	„	101
1173	Judith Scott		England	1792	102
1174	A. Nesbitt		Ireland	„	103
1175	Blanch Littleton		Wales	„	101
1176	Mary Bate	Pauper	England	„	105
1177	Janet Towns		Scotland	„	101
1178	Mrs. Lowdisdon		England	„	103
1179	Mrs. Mawhood		„	„	100
1180	J. Aldebort		Poland	„	105
1181	Mary Annett		England	„	103
1182	S. Paudames		„	„	105
1183	Joan Harrington		„	„	101
1184	J. Roberts		„	„	103
1185	Mr. Hammond		„	„	107
1186	Elizabeth Dowling		„	„	106
1187	W. Ritechie		Scotland	„	106
1188	Mrs. Clarke		England	„	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1189	R. Brent		England	1793	110
1190	Goodwife Mack		„	„	101
1191	M. M'Narvan		Scotland	„	104
1192	T. Garrick		„	„	108
1193	D. O'Grady	Farmer	Ireland	„	106
1194	Mrs. Pape		England	„	102
1195	R. Williams		„	„	102
1196	Hannah Cooke		„	„	100
1197	M. Fellerson		America	„	104
1198	D. M'Cullum		Scotland	„	104
1199	W. Nicholls		England	„	101
1200	Mrs. Burkin		„	„	101
1201	J. Burgh		„	„	100
1202	Mrs. Boardman		„	„	103
1203	Rachel Huddy		„	„	100
1204	H. Smalwood		„	„	104
1205	Sarah Haynes		„	„	103
1206	O. O'Neill		Ireland	1794	102
1207	J. Neil	Soldier	Scotland	„	107
1208	P. Stewart		„	„	102
1209	A. Gammels	Army	England	„	105
1210	Frances Bone		„	„	104
1211	Mr. Sherwood		„	„	105
1212	J. Pritchard	Linen Draper	Wales	„	101
1213	E. Lewis		England	„	104
1214	E. Jones		„	„	100
1215	Martha Willard		America	„	100
1216	H. Wells		England	„	109
1217	Agnes Melvin		Scotland	„	104
1218	Mrs. Middleham		England	„	101
1219	Mrs. Cope		„	„	100
1220	Evans	Silversmith	„	„	101
1221	W. Clayton		„	„	100
1222	Elizabeth Haye		„	„	110

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1223	Mrs. Seal	Pauper	England	1794	101
1224	Mrs. King		"	"	100
1225	Richard Brown		"	"	108
1226	R. Gough		"	1795	101
1227	Grizel Pettigrew		Scotland	"	104
1228	Barbara Stirling		"	"	101
1229	Mrs. Whitehouse		"	"	109
1230	Anne Gardener		England	"	101
1231	John Baugh	Farmer	"	"	103
1232	T. Seville		"	"	103
1233	J. Brindley		"	"	109
1234	Rebecca Poney		"	"	106
1235	F. Tait		"	"	109
1236	R. Pye		I. Strouna	"	102
1237	J. Wilson		England	"	100
1238	J. Smith	Labourer	Scotland	"	101
1239	Mrs. Beresford		Ireland	"	103
1240	Marion Muir		Scotland	"	103
1241	Maria Kries		Switzerld.	"	104
1242	Mrs. Ogden		England	"	106
1243	J. Borranstone		Priest	"	100
1244	M. Phillips		Soldier	"	103
1245	Nanny M'Daniel		Ireland	1796	106
1246	Mrs. Smith		England	"	101
1247	W. Gibson		"	"	102
1248	Mrs. Kelly		Ireland	"	105
1249	Susan Mills		England	"	102
1250	J. Durham		Army	"	101
1251	B. Gibbs		Farmer	"	104
1252	W. Stephenson		"	"	103
1253	Anne Bickersteth		"	"	103
1254	J. Wizzal	Army	"	"	103
1255	Elizabeth Hunt		"	"	100
1256	T. Taylor	Cobler	"	1796	103

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1257	W. Windness		England	1796	110
1258	Aun Keighly		"	"	100
1259	Jane Collins		"	"	102
1260	David Caldwell	Army	Scotland	"	107
1261	Ann Watkins		Ireland	"	107
1262	Mrs. Holmes		England	"	103
1263	Jeremiah Atkins	Army	"	"	102
1264	T. Jackson	Farmer	"	"	105
1265	C. Macklin	Actor	"	1797	107
1266	T. Wigmore		"	"	102
1267	Anne Prigg		"	"	104
1268	J. Stowers	Farmer	"	"	101
1269	Mrs. Church		"	"	109
1270	Mrs. Reynolds		"	"	109
1271	Mary Davis		"	"	105
1272	J. Pearce		"	"	105
1273	Winifred Foxon		"	"	104
1274	Hannah Sturges		Flanders	"	106
1275	Mrs. Crossman		England	"	106
1276	H. Gray	Innkeeper	"	"	102
1277	W. Birkhead		"	"	100
1278	Anne Gray		"	"	100
1279	Alice Pilcher		"	"	104
1280	W. Giseman	Farmer	"	"	109
1281	Catharine Richardson		"	"	109
1282	J. Knowles	Pauper	"	"	109
1283	Catharine Ducket		"	"	106
1284	Anne Fulford		"	"	101
1285	Margaret Woods		"	"	100
1286	Anne Pickering		"	"	110
1287	Mary Chilcott		"	"	101
1288	David Claybrook		"	"	100
1289	J. M'Gregor	Army	Scotland	1798	108
1290	G. Angus	Labourer	"	"	106

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1291	T. Jackson		England	1798	103
1292	R. Hamer		"	"	102
1293	E. Farral		Ireland	"	108
1294	I. Lottin		France	"	101
1295	Elizabeth Patrick		England	"	100
1296	Martha Gillet	Pauper	"	"	100
1297	Susannah Reynolds		"	"	107
1298	W. Hyde		"	"	106
1299	John Oyl		"	"	107
1300	Mary Climment		Scotland	"	102
1301	Louis Bisset		England	"	109
1302	J. Yerbury		"	"	100
1303	W. Rolfe		"	"	101
1304	W. Westmoreland		"	"	100
1305	J. Hastic	Army	"	"	100
1306	Elizabeth Reid	Negro	Jamaica	"	106
1307	B. Swan	Clergyman	Ireland	"	102
1308	J. Evans		Scotland	"	101
1309	W. Watt		"	"	102
1310	J. Saunders	Dealer	England	1799	106
1311	Anne Day	Gipsy	"	"	108
1312	Frances Rodd		"	"	100
1313	Mrs. Owen		"	"	107
1314	Mary Austin		"	"	100
1315	Mrs. Tilsley		"	"	102
1316	S. Ellerton		"	"	104
1317	Jane Yanson		Scotland	"	102
1318	John Wilson		England	"	100
1319	J. Dyce		Scotland	"	107
1320	G. Brooks		England	"	101
1321	Mrs. Battey		"	"	104
1322	N. Moses		"	"	108
1323	Sarah Cartmala		"	"	103
1324	J. King		Scotland	1799	103

APPENDIX.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1325	L. Levi		England	1799	105
1326	J. M'Kee		"	"	100
1327	Agnes Bayne		"	"	106
1328	Marguerite Corbie		Belgium	"	102
1329	J. Sayer		England	"	110
1330	Mary Jones	Pauper	"	"	105
1331	Humphries	Carpenter	"	"	102
1332	Sarah Prossen		"	1767	102
1333	Susannah Hollian		"	1780	100
1334	James Hayley		"	1781	112
1335	Ann Cathboth		"	1775	105
1336	Mrs. Dunn		"	1800	102
1337	Jane Fraser		"	"	103
1338	Sarah Miller		"	"	100
1339	J. Christie	Servant	Wales	"	105
1340	A. Bennett	Soldier	England	"	106
1341	Janet Dunlop		Scotland	"	102
1342	H. Humphries		England	"	102
1343	W. Upton	Gentleman	Ireland	"	104
1344	Ann Hutchinson		England	1801	101
1345	N. Fielding	Farmer	"	1802	100
1346	J. Hannson	Labourer	"	"	106
1347	Omer		Wales	"	104
1348	Sarah Brown		England	1803	100
1349	Thomas Scales		"	"	106
1350	Jean Pairir		"	1802	103
1351	M. Bell	Deputy ranger	Ireland	"	108
1352	Martha Anns		England	"	100
1353	Mrs. Manners		"	"	102
1354	Samuel David Levy	Wanderer	Holland	"	100
1355	W. Ashenhurst		Ireland	"	100
1356	T. O'Reiley		Ireland	"	102
1357	I. Craig		Scotland	"	101
1358	Mrs. Cleyne	Lady	France	1803	106

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1359	James Hosier	Labourer	Scotland	1803	104
1360	Mrs. Robinson	Poor woman	England	1816	107
1361	Johanna Bowden	Pauper	"	1803	103
1362	G. Cooper		Scotland	"	103
1363	Mrs. Mackenzie		England	1804	100
1364	Mary Preece		"	"	101
1365	John Bays	Farmer	"	1802	101
1366	Jane George		Scotland	1804	110
1367	R. Heaton	Farmer	England	1805	103
1368	Henry Marsham		"	"	100
1369	Unknown	Farmer	Wales	"	105
1370	"		Western Isles of Scotland	1768	103
1371	Maria Walker	Lady	England	1805	100
1372	E. Lawson		"	1806	106
1373	R. Swifield	Chel. Pensioner	"	"	105
1374	A. Moss	"	"	"	106
1375	A. Campbell	Watch Maker	Scotland	"	107
1376	Manders	Servant	England	"	104
1377	Mary Taylor	Laundress	"	"	105
1378	Barouth		"	"	102
1379	W. Welsh	Itinerant Tinker	"	1805	104
1380	Margaret Shirwin		"	1806	102
1381	J. Potts		"	"	103
1382	Homidge		"	"	100
1383	Maria T. Twist		"	"	104
1384	Mrs. Lawrance	Nurse	"	"	105
1385	J. Turpin	Farmer	"	"	104
1386	W. Marchant		"	"	107
1387	John Moore	Sailor	"	"	101
1388	John Shortal		Ireland	"	106
1389	Mrs. Hammond		Ireland	1806	103
1390	Mrs. Galey		England	"	100
1391	Mrs. Thomas		Wales	"	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1392	Eliz. Calomier		France	1807	104
1393	Amelia Butcher	[seller	England	„	104
1394	Malcolm White	Wandering tract	Scotland	„	102
1395	Mrs. Wilson	Servant	Keswick	„	102
1396	James Lock	Soldier	England	„	105
1397	T. Hage	Farmer	Ireland	„	107
1398	Alice Longworth		England	„	110
1399	John Maxwell		Scotland	„	107
1400	Peter Daniels	Pauper	England	„	104
1401	D. Hampson	Blind harper	Ireland	„	110
1402	John Key		England	„	107
1403	Barbara Mackey		„	„	102
1404	John Strangeway	Servant	„	„	100
1405	Mrs. Cattieson		„	„	102
1406	J. Peters		America	„	107
1407	Mrs. Gowans		„	„	104
1408	J. Waitc	Pauper	England	1808	107
1409	Mrs. M'Murtrie		„	1816	102
1410	W. Robley	Farmer	„	1808	100
1411	J. Oxley	„	„	„	105
1412	Bridget Betam		Ireland	„	110
1413	Mrs. Storks		England	„	101
1414	W. Truman	Farmer	„	„	104
1415	John Reside	„	„	„	102
1416	V. Walsh	„	Ireland	„	109
1417	Mary Ayston		England	1809	105
1418	Sarah Dean		„	„	102
1419	J. Robertson	Carpenter	„	„	103
1420	Susannah Right		„	„	100
1421	W. Anderson	Gentleman	„	„	102
1422	Mary Dowdeswell	Beggar	„	„	110
1423	G. M'Kean		Ireland	1809	109
1424	M. Badmaker	Shoemaker	Holland	„	110
1425	W. Steel	Lient. Col.	Scotland	1810	104

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1426	Mary		Ireland	1810	105
1427	James Gilson	Pauper	England	„	106
1428	Ann Allardin		Scotland	„	100
1429	Woman unknown	Beggar	Holland	„	100
1430	F. Toumeron	Mason	France	„	103
1431	Mary Wolfe		Scotland	„	103
1432	Margaret Jullan	Servant	„	„	100
1433	Jane Jeffreys		Wales	„	104
1434	Eliz. Honeychurch		England	„	100
1435	—	Servant	Spain	„	106
1436	Robinson	Labourer	England	„	107
1437	Mrs. Howell		„	1817	107
1438	Ed. Meley		„	1811	110
1439	Mrs. Blackey		Scotland	„	104
1440	Mary Rouse		England	„	102
1441	John Cowie	Bellman	Scotland	„	108
1442	Mary Discombe		England	„	102
1443	John Dunn	Farmer	Scotland	„	103
1444	Mrs. Milbourne		„	„	104
1445	Olivier Gears	Pauper	England	„	104
1446	Rd. Bently	Labourer	„	„	101
1447	L. Bolton	Gentleman	„	„	103
1448	J. Williams		Scotland	„	107
1449	James Fuller		England	„	101
1450	R. Macanter		Wales	„	100
1451	Mary Martin		England	„	109
1452	Anne Thompson		Scotland	„	103
1453	John Upton		England	„	101
1454	John Williams		„	„	107
1455	Ellen Barth		„	„	100
1456	John Brown		„	„	103
1457	Christian Cattonat		England	1811	101
1458	J. Schiffer	Husbandman	Germany	„	109
1459	Mrs. Robshaw		England	1811	103

APPENDIX.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1460	Mrs. Stand		England	1811	101
1461	Mrs. Smith		"	"	101
1462	Martha Morris		"	"	104
1463	W. Hatton		"	"	100
1464	Anne Hancock		"	"	104
1465	J. Halliday		"	"	100
1466	S. Mogg	Soldier	"	"	102
1467	D. M'Kinnon	"	Scotland	1812	102
1468	T. H. Robersay	Labourer	France	"	105
1469	T. Wood	Parish clk. 73 yrs.	England	"	106
1470	Rosamond Castham	Spinster	"	"	103
1471	Parker	Laundress	"	"	102
1472	Ann Hayton	Servant	"	"	102
1473	Mrs. Cam			1814	100
1474	Mrs. Scott			"	100
1475	J. Freeman		America	1806	107
1476	J. Dediens		France	1814	106
1477	Mrs. Clements		England	"	104
1478	J. Walsh		Ireland	1815	103
1479	J. Donaldson		England	"	102
1480	Simon	Coll. of Excise	Scotland	"	100
1481	Mary Wilkinson	Poor woman	Yorkshire	"	109
1482	W. Elrick	Day labourer	England	1818	103
1483	Ann Baker		Spain	1816	100
1484	Miss Lockwood	Lady	Bavaria	"	102
1485	Mrs. Oldham		England	"	105
1486	R. Porney	Pauper	"	"	106
1487	Cervetto	Musician	"	"	102
1488	G. Buck		"	"	102
1489	P. O'Brien	Cooper	Ireland	"	107
1490	R. Hickes	Yeoman	England	1816	103
1491	E. Saunders	Blind Beg. 82 Yrs.	"	"	106
1492	Mrs. Huntback	Lady	"	"	100
1493	J. Cressey		"	"	102

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1494	Mary Johnson		England	1816	103
1495	Ann Taylor	Pauper	"	"	102
1496	Eleanor Hinds		Ireland	"	106
1497	Alex. Cameron		"	"	107
1498	Mary Calnented		Scotland	"	103
1499	J. Conn		Ireland	1817	106
1500	H. Phips		England	"	105
1501	Sarah Hearn		"	"	100
1502	Mary Preeecs		"	"	101
1503	Mrs. Church		"	"	109
1504	Mary Davis		"	"	105
1505	J. S. Dodd	Surgeon	Ireland	"	104
1506	B Garnet		"	"	105
1507	J. Domaine		"	"	109
1508	Miss Heath	Lived in an Alm's House in Exeter	"	"	102
1509	Her Sister		"	"	100
1510	Mary Bristol		"	"	104
1511	W. Numiae	Gardener	"	"	104
1512	Mrs. Imon		"	"	100
1513	H. Phillips		"	"	103

TABLE II.

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country	Died.	Age.
1	St. Coemgene	Bishop	Ireland	618	120
2	Piastus	King of Poland	Poland	861	120
3	Agnes Skuner	Widow	England	1499	119
4	J. Sagar		"	1668	112
5	Castra	Advocate	France	1710	111
6	T. Coward		England	1731	114
7	W. Edie	Bellman	Scotland	"	120
8	Mrs. Herriman		England	1732	115
9	Ann Ross		Scotland	"	118
10	W. Haseling	Soldier	England	1733	112
11	Gundy	Gentleman	"	"	116
12	Truss	Soldier	"	"	112
13	R. Griffin		"	1736	116
14	T. Azbey	Soldier	"	1737	112
15	J. Phillips		"	1742	117
16	J. Littlejohn		"	"	118
17	F. Purdigo		Jamaica	1743	114
18	J. Jobson	Farmer	England	"	112
19	A. Turnbull		"	1744	112
20	Dason de Veger		France	"	118
21	Ann Welding		England	1747	113
22	W. Catanack		Scotland	"	119
23	J. Hussey	Farmer	England	1748	116
24	Hare	Servant	"	1749	117
25	J. Collins		"	1750	112
26	P. Benwell		"	"	114
27	Mrs. Gannet		"	1751	112
28	Mary How		"	"	112
29	L. Kinnenmont		Scotland	"	111
30	Mrs. Mackarny	Beggar	Ireland	"	120
31	Grace Sundry		England	"	112
32	R. Magrath	Lawyer	Ireland	1752	115

APPENDIX.

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Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
33	J. Evans		Wales	1752	117
34	D. M'Carthy		Ireland	1753	111
35	Isabella Laughlin		"	"	118
36	J. Couse	Soldier	France	"	112
37	Mrs. Coxson		England	"	117
38	T. Coward		"	"	114
39	Margaret Wylie		Scotland	"	113
40	S. Collins		England	1754	114
41	P. Bryan		Ireland	1755	117
42	J. Lorkan		"	"	112
43	Eltoff		England	"	114
44	Margery Brider		"	1756	113
45	J. Phelan	Tinker	Ireland	"	112
46	Margaret Stephenson		England	"	112
47	Ann Maynard		"	"	112
48	Isabel Darling		"	1757	111
49	J. Green		"	1758	112
50	J. Davies	Soldier	"	"	112
51	G. Vanee		Ireland	"	119
52	Mrs. Fairburn	Housekeeper	England	"	112
53	P. O'Brian	Carpenter	Ireland	"	114
54	Espagno	Surgeon	France	1759	112
55	J. Gonzales		Spain	"	118
56	Janet Blair		Scotland	"	112
57	J. Riva	Stock-broker	Italy	1760	116
58	D. Lacy		Ireland	"	112
59	Eliz. Van Huyster		Holland	"	115
60	Elizabeth Beal		England	"	111
61	J. McDonald		Ireland	"	117
62	G. Lehman		Lusatia	1761	112
63	Bromfish	Captain	Prussia	"	112
64	Mrs. Cotterel		America	"	115
65	Mrs. Gillam		England	"	113
66	John Lyon	Soldier	Ireland	"	116

APPENDIX.

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
67	Wm. Marsh	Pavier	England	1761	111
68	Sarah Brown		„	„	112
69	Mrs. Otherley		Italy	„	114
70	D. Ammyer	Soldier	Grosxieeen	„	114
71	Gaspard Baleke		Hungary	1762	113
72	Elizabeth Smith		England	„	111
73	Mrs. Haddum	Pauper	„	„	114
74	T. Maratrai	Labourer	France	„	112
75	R. Oglebie	Tinker	England	„	115
76	T. Sprat		„	1763	115
77	W. Haseling	Soldier	„	„	112
78	J. Martin		Ireland	„	112
79	J. Dwyer		„	„	115
80	Mrs. Wilson		England	„	111
81	Osbaldeston	Gentleman	„	„	115
82	P. Alley	Clergyman	Ireland	„	111
83	P. Schurman		Holland	„	113
84	Jane Blake		England	„	114
85	Nicholas Gallagher		Ireland	„	113
86	Wallace		France	„	112
87	P. Martin		„	1764	113
88	Mrs. Clifford		Ireland	„	117
89	P. Nielsen		Denmark	„	115
90	David Evans	Sailor	England	„	114
91	J. Roberts		„	„	113
92	J. Meyer		Switzerld.	„	115
93	J. Bourke		I. of Man	„	112
94	J. Jackson	Gardener	England	„	113
95	Brett	Gentleman	Ireland	„	115
96	Judith Cooley		„	1765	116
97	W. Vandeleur	Shoemaker	Holland	„	112
98	G. Mearton	Fisherman	„	„	118
99	Eliz. Macpherson		Scotland	„	117
100	T. Grant		England	„	111

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
101	J. Nielson	Priest	Zealand	1765	119
102	M. Gonzara		Holland	1766	114
103	M. Richardson		England	,	111
104	Mrs. Hewetson		"	"	116
105	S. Holly		Moravia	,	119
106	J. Simpson		England	,	112
107	S. Jerando		Spain	,	119
108	E. Branagh		Ireland	,	115
109	P. Le Grand		France	,	115
110	Mrs. Lent		England	,	112
111	Mary Finlater	Wheelwright	Scotland	1767	113
112	R. Cumming		England	,	116
113	Ann Allard		France	,	117
114	Abel Gerbrands		Holland	,	118
115	S. Gilliowray		I. St. Kilda	,	113
116	D. Neale		Ireland	,	117
117	Price		Gentleman	,	111
118	Mrs. Edwards		England	,	118
119	Esther Duggan		Wales	,	118
120	Mrs. Stoneham		Ireland	1768	119
121	Fraser	Soldier	England	,	113
122	D. M'Gregor		Ireland	,	118
123	R. Day		Scotland	,	117
124	Mr. Early		England	,	117
125	R. Ogleby		Soldier	,	112
126	R. Ogleby		Tinker	,	114
127	J. Gardy		Belgium	1769	112
128	Dives		Gentleman	,	115
129	J. Berry		England	,	112
130	Mary Gold		Saddler	1770	112
131	Price	Gentleman	"	,	112
132	P. la Borie		"	,	113
133	J. Riva		Husbandman	1771	113
134	H. la Rosa		Stockbroker	Africa	,
	Mrs. Edwards		Spain	,	118
			England	1772	117

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
135	Margaret Aunfree		Holland	1772	119
136	W. Broughbridge	Clergyman	England	„	112
137	J. Roberts	Soldier	„	„	111
138	J. Morse	Pauper	„	„	112
139	J. Noble		„	„	114
140	Mrs. Hinks		„	„	118
141	A. Larsson		Sweden	„	115
142	W. Hunt		America	„	113
143	Rice	Cooper	England	„	115
144	T. Pearce	Labourer	„	„	112
145	M'Donald	Colonel	Scotland	„	112
146	F. Joannes		Friesland	1773	113
147	J. Nicholls		England	„	111
148	J. Bell		Holland	„	113
149	W. Wootten		America	„	111
150	P. Collett	Cobler	England	„	112
151	A. Cambulas	Priest	Spain	„	114
152	H. Moran	Soldier	Ireland	„	113
153	M. Humphries	Fisherman	England	„	112
154	Ellen Hitchcock		„	„	118
155	Mrs. Widmear		„	„	115
156	Mr. Hopley	Merchant	„	„	114
157	Clarkson		„	„	112
158	H. Crummy		Ireland	„	114
159	T. Laskay	Merchant	France	1774	114
160	R. Gibson	Farmer	England	„	117
161	Mrs. Bonefaut		„	„	114
162	A. Duncan		Scotland	„	112
163	S. M'Alester		Ireland	„	118
164	Clayton	Farmer	England	1775	119
165	W. Skillingsby		„	„	119
166	Mrs. Coen		Ireland	1776	112
167	D. Brian		„	„	117
168	Mrs. Clark		England	„	112

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
169	Jane Davis	Lady in Office	England	1777	113
170	J. Houseman	Labourer	„	„	111
171	John Dyer	Soldier	„	„	112
172	P. Derry		Ireland	„	114
173	W. Iven		England	1778	115
174	Mrs. Worthington		„	„	117
175	F. Rousseau		France	„	113
176	P. McCabe		Ireland	„	115
177	J. Sympson		England	1779	114
178	Mrs. Pollard		Barbadoes	„	115
179	Richard Gower	Lawyer	Ireland	„	111
180	A. Hopper	Soldier	„	„	115
181	T. M'Namara		„	„	112
182	T. Hughes	Captain	„	1780	112
183	M. Bingham	Fisherman	„	„	116
184	T. Hume		„	„	115
185	Mrs. Petitt	Pauper	„	„	114
186	J. Pratt	Labourer	„	„	113
187	H. Grosvenor	Surveyor	Ireland	„	115
188	Mrs. Swanbrook	Pauper	„	„	111
189	J. Woodworth		„	„	112
190	F. Tatton	Old Minstrel	England	„	114
191	J. O'Brian	Pay-Master	Ireland	„	114
192	Mrs. Touchit		Barbadoes	„	115
193	A. Rawlinson	Farmer	England	1781	111
194	Mrs. Foley		Ireland	„	117
195	J. Hayley	Farmer	England	„	112
196	Mrs. Street		„	1782	114
197	B. Blakeney	Soldier	Ireland	„	114
198	V. Cateby	Sailor & Farmer	England	„	116
199	J. Roberts	Blacksmith	Wales	„	111
200	J. Wilson		England	„	119
201	J. Wilson		„	„	116
202	J. Jenkins	Labourer	„	„	111

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
203	M. Stevenson		England	1782	117
204	Mrs. Melville		Scotland	1783	117
205	Mrs. Tate		England	„	116
206	A. Macdonald		Scotland	„	113
207	A. Loydi	Husbandman	S.America	„	114
208	A. Mackintosh	Soldier	Scotland	„	112
209	A. Kilpatrick	„	Ireland	„	116
210	A. Buchols		Germany	„	115
211	J. le Measurer		France	„	118
212	Mrs. Holmes		England	„	114
213	G. Harding	Soldier	„	1784	111
214	Mrs. Firth.		„	„	111
215	L. Jones		Wales	„	113
216	H. Hughes		England	„	115
217	Eliz. Broadmead		„	„	117
218	Whip	Farmer	„	„	115
219	T. Kaspwck	Weaver	Moravia	„	118
220	Stahr	Soldier	Poland	„	118
221	Anne Simms	Poacher	England	1785	118
222	Mary M'Donnell		Scotland	„	118
223	W. Tasker		England	„	118
224	M. Reid		Scotland	1786	114
225	J. Buller		France	„	114
226	Mrs. Heath		England	„	119
227	Mrs. Kerr		„	„	111
228	V. Nogueira		Portugal	„	117
229	T. M'Leod	Soldier	Scotland	1787	113
230	P. Connolly	Gentleman	Ireland	1788	114
231	J. Simpson	Gentleman	England	„	113
232	Mrs. Clare	„	„	„	114
233	W. Riddell	Smuggler	Scotland	„	116
234	S. Warrell	Fisherman	England	1789	119
235	Marie de Chapelete		Russia	„	111
236	T. Salgador		Portugal	„	112

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country	Died.	Age.
237	A. Noble	Gardener	Ireland	1790	115
238	F. Nenez	Meehanic	Portugal	„	119
239	W. Marshall	Tinker	England	„	117
240	H. Lewellyn	Harper	Wales	„	115
241	M. Supple		Ireland	„	114
242	P. Scaria		Spain	1791	111
243	T. Whims	Soldier	Ireland	„	117
244	Mrs. Froste		England	1792	111
245	T. Craig	Soldier	Scotland	„	111
246	J. Minnikin		„	1793	112
247	W. Billings	Soldier	England	„	114
248	M. Champion	Pauper	„	„	111
249	Mrs. Freeman		„	„	118
250	Mrs. Warren		Ireland	1794	112
251	Mrs. Hunter		England	1795	115
252	J. Gill		„	1796	114
253	C. Roberts		„	„	116
254	J. Stephenson		England	1797	117
255	Ingleby	Servant	„	1798	117
256	J. Weeks		America	„	114
257	Jean Petrie		Scotland	„	113
258	J. Jackson	Gunner	England	1799	117
259	Ann Kerney		„	1763	120
260	D. Joyee		Ireland	1765	120
261	Mrs. Moore		Scotland	„	120
262	J. Mackay		Wales	1766	120
263	J. Rimmoni		Holland	„	115
264	J. Haynes	Shoemaker	England	„	120
265	Francis Monno		Spain	1767	120
266	Adams		Ireland	1768	120
267	J. Chump	Gentleman	„	1769	120
268	Gilshenan		„	1772	120
269	Barbara Wilson		Scotland	1773	120
270	S. de la Haye	Soldier	France	1774	120

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
271	Mary Rogers		England	1779	118
272	Coward	Gentleman	„	1789	116
273	M'Intosh		Scotland	1790	120
274	J. Campbell	Sailor	„	„	120
275	F. Hope		England	1792	120
276	W. Marshall	Tinker	Scotland	„	120
277	Mrs. Johnson		England	„	120
278	W. Troy	Farmer	Ireland	„	120
279	Mrs. Fitzgerald		England	1795	111
280	S. M'Alcester		Ireland	1773	118
281	Elizabeth Shaw	Parishioner	England	1800	117
282	Marianne Staugy		Silesia	1802	115
283	Mrs. Golding		England	„	112
284	Elizabeth Rose	Servant	Scotland	1799	112
285	Elizabeth Hussey	Creole	Barbadoes	1804	112
286	D. Cavnoble	Farmer	Ireland	1805	117
287	W. Simpson	„	„	„	119
288	Pompei	Black	America	„	120
289	John Wagner	Soldier	Neubourg	„	113
290	Mrs. Bridget		Ireland	1806	118
291	Unknown	Poor Woman	England	„	116
292	John Hanyston	Labourer	„	1805	111
293	Mrs. Mills	Midwife	Jamaica	1806	118
294	Ann Strange		England	1807	111
295	S. Dalten		America	„	115
296	Mary Heyward		England	1808	112
297	John Stewart	Colonel	Scotland	„	111
298	De Fournelle	Physician	France	1810	120
299	P. Anderson	Labourer	Scotland	„	115
300	Flora Macdonald	Poor Woman	„	„	120
301	Mrs. Fletcher		Jamaica	„	120
302	Thos. Relertson	Stocking-knitter	Scotland	„	115
303	Gordon	Military Invalid	Prussia	1811	116
304	John Ursylake	Silk Weaver	„	„	116

Persons who have attained Ages from 110 to 120 Years.

No.	Name.	Condition.	Country.	Died.	Age.
305	Mary Harris		England	1811	113
306	Margaret Stewart		Scotland	„	115
307	Isabella Sharp		England	1812	114
308	Elizabeth Freer	Pauper	„	„	116
309	W. Ruthven		Scotland	1814	115
310	J. Beaty	Weaver	Ireland	„	111
311	T. Ganghaw	Labourer	„	„	111
312	Jean Mouslee	Tile Maker	France	1813	115
313	S. Wagner	Soldier	Russia	1815	113
314	Mrs. Johnson		England	„	114
315	—		Tripoli	„	116
316	Skenandon	Indian Chief	America	1816	116
317	Mrs. Chapman		England	„	111
318	Mary Tate		„	„	116
319	Margaret Melvill		Scotland	„	117
320	T. Skinsally	Butler	England	„	119
321	Mary Brook		„	„	119
322	W. Towson	Soldier	„	„	114
323	Mary Sting		„	1817	111
324	Alex. Campbell	Soldier	Scotland	1816	116
325	S. Levy	Painter & glazier	Holland	1818	118
326	—	Water carrier	England	„	115
327	Margaret Reinaud	Spinner at distaff	France	1819	117
328	Bucknor		Ireland	1822	112
329	Mrs. M'Kae		Scotland	1821	112
330	— Brown	Beggar	England	„	120
331	Patrick Wian		„	„	115

TABLE III.

Persons who have attained Ages from 120 to 130 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1	R. Montgomery	Beggar	England	1671	127
2	J. Bayles		"	1706	126
3	Jane Serimshaw	Pauper	"	1711	127
4	W. Wakeley		"	1714	124
5	Mrs. Baylis		"	"	126
6	J. Grasmay		Hungary	1740	125
7	Mary Pymm	Beggar	England	1743	121
8	Peter Mestanca	Villager	Marcia	"	130
9	Mrs. Bowles		England	1749	124
10	A. Bennet	Soldier	Ireland	"	125
11	J. Battesworth	Gentleman	England	"	130
12	Bueno	Don	Portugal	1753	124
13	A. Schmidt		Silesia	"	124
14	J. Walney	Carpenter	Scotland	1757	124
15	R. Parr		England	"	124
16	D. Grant		Scotland	1758	127
17	Catherine Giles		Ireland	"	122
18	H. Camoux	Labourer	France	1759	121
19	D. Cameron		Scotland	"	130
20	E. Hilton		England	1760	121
21	J. Newell	Gentleman	Ireland	1761	127
22	Catherine Brebner		Holland	1762	124
23	J. Noon		Ireland	"	129
24	J. Michaelstone		England	1763	127
25	G. Kirton	Gentleman	"	1764	125
26	M. Hubert		Ireland	"	121
27	O. Carollan	Labourer	Ireland	"	127
28	E. Hoff	Soldier	America	1765	128
29	J. de la Somet		"	"	130
30	J. King		England	1766	130
31	Eliza Willson		"	1767	122
32	J. Hill		Scotland	"	130

Persons who have attained Ages from 120 to 130 Years.

No.	Name.	Condition.	Country.	Died.	Age.
33	J. King		England	1767	130
34	Bridget Spedding		„	1768	123
35	W. Johnson	Lieut. Colonel	„	„	127
36	J. Gale		Ireland	1769	129
37	Martha Preston		England	„	125
38	G. Delaney		France	„	122
39	J. Rider	Army	Germany	„	121
40	T. King	Thresher	England	„	130
41	F. Shepard	Knight	„	„	121
42	W. Hughes		„	„	127
43	W. Farr	Carrier	„	1770	121
44	Mrs. Gray		„	„	121
45	Mrs. Carman		Ireland	1771	122
46	F. Benic		France	1772	121
47	O. Tudor	Gentleman	Wales	„	121
48	Fleming	„	England	„	128
49	Margaret M'Kay		Scotland	„	121
50	J. Gough	Doctor	Ireland	„	129
51	J. Whalley	Pauper	England	„	121
52	A. Strodnan		Egypt	„	128
53	Madame Maiden		France	„	127
54	J. Forthton		Spain	1773	127
55	Eleanor Spicer		America	„	121
56	W. Beaty	Army	England	1774	130
57	J. Tiee		„	„	125
58	A. Debra		Italy	„	123
59	D. Mulleery		Ireland	„	127
60	A. Vidal		Brazil	1775	124
61	Mrs. Jones		England	„	125
62	Mary Yates	Pauper	Wales	1776	128
63	Mdme. Bonnemaison		France	„	122
64	J. Watson	Park keeper	England	1778	130
65	J. Aragus	Caravan driver	Turkey	„	123
66	Margaret Scott		Scotland	1779	125

APPENDIX.

Persons who have attained Ages from 120 to 130 Years.

No.	Name.	Condition.	Country.	Died.	Age.
67	R. M'Bride	Fisherman	Scotland	1780	130
68	Gernon	Gentleman	Ireland	„	125
69	Froome	Gardener	England	1784	125
70	Mary Cameron		Scotland	„	128
71	Clooster	Army	Westphalia	1785	125
72	Ostroki	Royal Page	Poland	1786	125
73	P. de Vertot		France	„	129
74	A. Wilson	Farmer	Scotland	1787	123
75	Kirwan	Gentleman	Ireland	1788	127
76	Henrietta Long	Hawker	England	„	121
77	Jean Cayetan		New Spain	„	130
78	Kitty Phelan		Ireland	1789	126
79	J. Jacob		Switzerld.	1790	128
80	A. Cameron	Piper	Scotland	1792	122
81	M. Tait	Soldier	„	„	123
82	J. Crewman	„	England	1794	123
83	S. Pinnock	Negro	Jamaica	1795	125
84	Eliza Brown	Negress	„	1797	124
85	Priscilla Wagg	„	St. Iago	„	121
86	—	Shepherd	Hungary	1800	126
87	Crick	Schoolmaster	England	1806	125
88	John Ramsay	Mariner	„	„	125
89	Martha Hannah		Ireland	1808	123
90	—	Female pauper	England	1809	124
91	Elizabeth Haywood	Freee negress	Jamaica	„	130
92	Alexis Netchfad	Peasant	Russia	1811	124
93	Female		Ireland	1803	128
94	Zaffri		Italy	1817	125
95	J. Woods	Farmer	Ireland	1818	122
96	D. Ferguson	Labourer	France	„	124
97	Jane Sands		England	„	121
98	Frances Bona		France	1769	121
99	— Polezew		England	„	130

TABLE IV.

Persons who have attained Ages from 130 to 140 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1	G. Holme	Pilot	England	1685	132
2	W. Leland		Ireland	1732	140
3	J. Rousey	Gentleman	Scotland	1734	138
4	Margaret Patten	Panper	„	1739	137
5	W. Sharply	Lath maker	Ireland	1757	138
6	J. Sheile		„	1759	136
7	Fliz. Marchant		„	1761	133
8	Eliz. Taylor		England	1764	131
9	— Dobson	Farmer	„	1765	139
10	F. Ange		„	1767	134
11	Kitty Noon		Ireland	„	136
12	Butler	Gentleman	„	1769	133
13	Margaret Foster		England	„	137
14	Mrs. Keithe		„	1772	133
15	Mrs. Clum		„	„	138
16	P. Garden	Labourer	Scotland	1775	131
17	Moval	Surgeon	„	1776	136
18	J. Langham		„	„	134
19	Ann Foster		England	„	132
20	W. Ellis	Soldier and sailor	„	1780	131
21	Evans	Gentleman	„	„	139
22	J. Hartop		„	1790	138
23	Robertson	Gentleman	Scotland	1793	137
24	Mrs. Thompson		Ireland	1796	135
25	J. Mount		Scotland	1776	136
26	A. Goldsmith		France	„	140
27	Robert Lloyd		Wales	1780	133
28	Duniter Raduly		Transylva.	1782	140
29	John Tucker	Fisherman	England	1806	131
30	John Paterson	Shepherd	Scotland	1807	131
31	J. Ram	Negro	Jamaica	1808	140
32	Sarah Anderson	Free black	„	1812	140

Persons who have attained Ages from 130 to 140 Years.

No.	Name.	Condition	Country.	Died.	Age.
33	Statia	Negro woman	Antigua	1817	132
34	J. Sands		England	„	140
35	W. Grulstone		Ireland	„	140
36	M. Lawrence		Orcades	„	140
37	Evan Williams		Wales	„	135

TABLE V.

Persons who have attained Ages from 140 to 150 Years.

No.	Name.	Condition.	Country.	Died.	Age.
1	Lynwarch Hen	Bard	Wales	500	150
2	Desmond	Countess	Ireland	1612	145
3	Eckleston		„	1691	143
4	T. Winslow	Gentleman	„	1765	146
5	F. Consit	Pauper	England	1768	150
6	C. Draekenburg		Denmark	1772	146
7	C. M'Tindley	Captain	Ireland	1773	143
8	W. Mead	M.D.	England	1652	148
9	S. Niblet		America	1816	143
10	S. Saek		Trionia	1764	141
11	Abraham Paiba		S.Carolina		140

TABLE VI.

Persons who have exceeded 150 Years of Age.

No.	Name.	Condition.	Country.	Died.	Age.
1	Thomas Parr	Labourer	England	1635	152
2	Thomas Damme		„	1648	154
3	H. Jenkins	Labourer	„	1670	169
4	P. Torten	Peasant	Hungary	1724	185
5	J. Rovin		„	1741	172
6	Jane Rovin		„	„	164
7	J. Maxwell		England	1785	152
8	J. Surrington		Norway	1797	159
9	Unknown		Lithuania	1804	168
10	Thomas Downe		England	1808	154
11	—		Russia	1814	180
12	—		„	„	200
13	J. Newman		England	1542	153
14	J. Torathe		Wales	1621	180
15	Elizabeth Torathe		„	1688	177
16	Jane Britten		„	1588	200
17	James Bowls		England	1656	152

OMITTED IN TABLE I.

Persons who have attained Ages from 100 to 110 Years.

No.	Name.	Condition	Country.	Date.	Age.
1514	Borlam Softley		„	1816	105
1515	Barbara Medley		„	„	100
1516	Mrs. Alchome		„	„	103
1517	W. Brown		Scotland	„	108
1518	Mrs. Sparke		England	„	106
1519	Mrs. Dight		„	„	102

TABLE VII.

Persons Living at time of the Report.

No.	Name.	Condition.	Country.	Date.	Age.
1	Sarah Williams		England	1809	108
2	W. Ruthven		Scotland	1810	111
3	B. Johnson	Musician	England	„	100
4	J. Hay		Scotland	1811	109
5	W. Marshall		„	1803	117
6	J. Stewart		Scotland	1805	111
7	D. Salmon		America	1807	104
8	Mary Ralphin		Scotland	„	109
9	S. Hart		„	1804	106
10	P. Sterm		Ireland	1772	109
11	Mrs. Bury		Ireland	„	102
12	H. Brown	Slave	America	1814	129
13	Eliz. Wyatt	Peasant	England	1804	101
14	Albt. de Mautaare	Jesuit	Italy	1814	122
15	Eliz. Hnrdun		England	„	108
16	Ferguson	Soldier	Scotland	1816	122
17	Ecles	Spinster	England	„	105
18	Legge		„	„	110
19	Miss Legge		„	„	106
20	3d Miss Legge		„	„	100
21	6th Miss Legge		„	„	112
22	M. Burwick		„	„	102
23	W. Riddell		Scotland	„	106
24	—	Hawker	England	„	105
25	M'Naughten		Scotland	1805	105
26	M. Acton	Peasant	England	„	100
27	T. Beaty	Gardener	Ireland	1806	102
28	S. Speirr	Peasant	England	„	109
29	Mrs. Chatterson		„	1807	101
30	A Woman	Pauper	„	„	104
31	T. Bently	Gardener	Ireland	—	103
32	Eliz. Danvieux	Servant	Savoy	1714	119

Persons Living at the time of the Report.

No.	Name.	Condition.	Country.	Date.	Age.
33	P. Bernoux	Carpenter	England	1801	115
34	Jane Rolph		„	„	107
35	J. Maurice	Winder of Twist	„	1807	102
36	Mrs. Knight		„	„	106
37	—		France	1802	110
38	—	Soldier	Germany	1803	180
39	Agnes M'Millan		Scotland	1799	114
40	J. Mirehouse	Yeoman	England	1805	100
41	J. Odlark	Wooleomber	„	1816	121
42	J. Goodgen		„	„	104
43	M. Lombardi	Priest		1817	110
44	A. Amadin		Scotland	1819	105
45	—	Soldier	Germany	1821	135
46	Eight Persons		Peru	1792	114—147
47	—		Spain	1765	144
48	Pilmer	Widow	England	„	100
49	Louisa Truxo	Negress	S. America	1780	175
50	J. Lawrcnee		Scotland	„	140
51	Marg. Forster		England	1771	136
52	Her Daughter		„	„	104
53	Jane Brooke		„	1779	134
54	P. M. Wian	Clergyman	„	1659	110

TABLE VIII.

Additional Instances of Longevity.

12 Persons performed a morris dance before King James I at Hereford, about the year 1612, whose ages averaged 100 years.

150 Married couples were living in Norway in 1763, who had lived together more than 80 years each.

70 Couples who had lived together 90 years each.

12 „ „ „ 100 to 105 years each.

1 „ „ „ 110 years.

When Christian, King of Sweden, visited his Norwegian dominions in 1773, Lieut.-Colonel Collinson held a jubilee-wedding at his country house, and presented to the King three peasants and their wives, each 100 years old or upwards, and one man and woman (not married to each other) of the same age; these eight persons were crowned with garlands, danced, and made themselves very merry.

Dr. Lister mentions that eight persons were living in the north of England, whose ages averaged 120 years each.

Spottiswood mentions one Kentigem (afterwards called St. Mongah, or Mungo, from whom the famous well in Wales is named), who never tasted wine nor strong drink, after he came to years of understanding, and slept on the ground; notwithstanding which he lived to the very extraordinary age of 185 years.

In Russia there died in the year 1806, 1427 persons between the ages of 95 and 150, viz. as follows:—

95	to	100	.	.	.	1134
100	„	105	.	.	.	137
105	„	110	.	.	.	86
110	„	115	.	.	.	26
115	„	120	.	.	.	32
120	„	125	.	.	.	6
125	„	130	.	.	.	4
130	„	135	.	.	.	1
135	„	150	.	.	.	1

In the year 1807, out of 828,561 registered deaths, there died 947 between the ages of 100 and 140, as follows:—

Above 100	.	.	.	.	783
,, 115	.	.	.	.	83
,, 120	.	.	.	.	51
,, 125	.	.	.	.	21
,, 130	.	.	.	.	7
,, 135	.	.	.	.	1
,, 140	.	.	.	.	1
					947

In the year 1809 there died 656 persons between the ages of 90 and 160, as follows:—

90 to 100	.	.	.	.	307
100 „ 105	.	.	.	.	188
105 „ 110	.	.	.	.	86
110 „ 115	.	.	.	.	36
115 „ 120	.	.	.	.	23
120 „ 125	.	.	.	.	8
125 „ 130	.	.	.	.	5
130 „ 140	.	.	.	.	1
140 „ 150	.	.	.	.	1
150 „ 160	.	.	.	.	1
					656

In 1812, out of a number of 971,358 registered deaths amongst members of the Greek Church, there died—

1 at 165				
3 „ 135				
1 „ 130				
15 „ 125				
33 from 115 to 120				
53 „ 110 „ 115				
127 „ 105 „ 110				
527 „ 100 „ 105				
1473 „ 95 „ 100				
2847 „ 90 „ 95				
4437 „ 80 „ 90				

In Sweden, between the years 1800 and 1810, there were living—

Between the ages of 100 and 105,	men	312
,, ,, ,, ,,	women	328
,, ,, 106 and 110,	men	31
,, ,, ,, ,,	women	36
,, ,, 111 and 120,	men	22
,, ,, ,, ,,	women	19
,, ,, 121 and 127,	men	1
,, ,, ,, ,,	women	1
		—
		750

The Reports of the Registrar-General of Births, Marriages, and Deaths give the following results for all England and Wales—Population 18,897,187:—

From 1838 to 1844, that is to say, in five years there died 1,237,986 persons, of these 708 were aged 100 or more.

I have not been able to avail myself of those very copious and able Reports after the above date, because since that period the statements have uniformly been 95 years and upwards, and all my tables were arranged as 100 and upwards.

Analysis of the Tables.

Table I.	Lives from 100 to 110 years . . .	1519
,, II.	,, 110 to 120 ,, . . .	331
,, III.	,, 120 to 130 ,, . . .	99
,, IV.	,, 130 to 140 ,, . . .	37
,, V.	,, 140 to 150 ,, . . .	11
,, VI.	Lives above 150 years . . .	17
,, VII.	Persons still living . . .	55
,, VIII.	Additional instances . . .	495
	Lives above 100 in Russia . . .	2179
	Lives in Sweden . . .	750
	For four years in England and Wales	708
	—	
		6201

The preceding Tables record that 6201 persons are said to have exceeded 100 years of age. They must be regarded as very short of the number which might be collected if proper attention were paid to the subject. I am fully aware that they may contain many errors and exaggerations, and perhaps some wilful misstatements; but, after having made a due allowance for all these, enough, and more than enough, will remain to justify a fair presumption that human life might endure much longer than it usually does, and to encourage the exertions of those who desire to promote healthful Longevity.



NOTES.

TABLE I.

No.

- 1 An Italian nobleman, who, when young, lived in a free and dissipated manner, and consequently became so afflicted by disease that it was not supposed he could live many months. At about 40 years of age he resolved on the extraordinarily temperate course of life which he ever after adopted, and, by rigidly adhering to it, became strong, and retained good health. He published a most curious and interesting account of all this, part of which is quoted in the preface. He took daily only 12 oz. of food and 20 oz. of wine. At 70 years old he was overturned in a carriage; one arm was broken, one leg dislocated, and his head much cut, yet he recovered easily.
- 2 Rode to the death of a stag at the age of 90.
- 4 Two years before she died she could spin.
- 19 Her father died at 126.
- 26 His wife died at 106.
- 27 Was six times married.
- 28 Died in St. George's Workhouse.
- 36 Never had a day's illness, nor ever used spectacles.
- 39 Could read to the last without spectacles, and only kept his bed one day.
- 46 Her senses were all unimpaired.
- 52 Died in St. Luke's Workhouse.
- 62 Senses all unimpaired.

No.

- 66 In complete health until a few minutes before her death.
- 76 Worked at his trade until within a few years of his death.
- 89 Never sick ; never used spectacles ; hunted a year before his death ; died suddenly.
- 93-94 Were married 70 years ; died within a few minutes of each other.
- 99 Never ill ; died suddenly.
- 102 Her father died at 101, and her mother at 104 years of age.
- 120 Her understanding remarkably clear, and could walk four miles at one time a few weeks before her death.
- 143 This celebrated man never suffered from any disease of importance, nor felt any of the ill-effects of age, until after his 90th year.
- 148 Died in St. George's Workhouse.
- 156 Became blind at 86, and at 106 regained his sight by being couched.
- 161 Had several new teeth at 90.
- 194 His father 107.
- 204 Was gay to the last ; at 104 she danced at the wedding of one of her grandchildren.
- 228 He was porter at the Palace Gate, Salisbury ; it was his duty to wind up a clock which was at the top of the Palace, and he performed this duty until within a year of his death. He was remarkably upright in his deportment, and walked well to the last.
- 285 Had a sister 105.
- 306 Her husband 104.
- 324 Her faculties remarkably strong ; she was active and able to walk until near her death.
- 336 His wife, aged 100, survived him.
- 338 Could walk five or six miles with ease until within a few months of his death.
- 342 Her husband died at 100.
- 360 Worked as a ploughman for 88 years.
- 395-396 Died within 48 hours of each other.
- 456 Wife died at 107.

No.

- 470 Had four new teeth at 92 ; was very intemperate, being drunk usually twice a week, until he was 100 ; worked hard up to the time of his death.
- 481 Wife died at 103.
- 503 Married thirteen husbands, and survived them all.
- 504 Drank nothing but water, and ate only once in each day.
- 528 Enjoyed complete health until within four months of her death.
- 536 Never ill a day.
- 583 Lived on vegetables only.
- 590 Wife 115 years old.
- 632 His father 116, his grandfather 107.
- 644 She never ate animal food.
- 649 She carried a bucket of water a considerable distance within a week of her death.
- 659 Was employed in spinning two hours before she died.
- 672 Was very deformed, and only 2ft. 8in. high.
- 692 Was in good health, and his faculties all complete, when he caught smallpox and died.
- 696 Was never ill.
- 778 Never used spectacles until within fifteen months of his death ; was healthy and active, and until three years before he died he directed the village choir.
- 786 Never ill for a week ; lived on bread, milk, and vegetables the last 40 years of his life.
- 822 *Vide 'Rees's Cyclopædia.'*
- 825 His father 104, his brother 95, his uncle 93, and very few of his family had died under 90.
- 831 Walked more than five miles three days before his death.
- 845 She was left at an early age a widow with several children ; she worked as a bricklayer's labourer until twenty years before her death, and then took to spinning ; she was never ill.
- 851 Worked until within one day of his death.
- 861 Father 107, grandfather 116.
- 866 The year before his death he did not appear more than 70

No.

- years old, and performed a journey of 60 miles on foot in two days.
- 877 His father 104, his mother 100.
- 878 Never ill until a few days before his death.
- 880 A week before his death he walked from Streatham, in Surrey (about five miles), and back again.
- 916 Walked to market, a distance of three or four miles, every week.
- 925 Had always good health.
- 929 Walked two miles a few months before his death.
- 943 Her husband 104.
- 944 Retained all his faculties until the end.
- 953 Lived at Merton Abbey, Surrey, about six miles from London; walked to town and back again daily, until within a few months of his death.
- 977 Had good health and all his senses perfect until he died.
- 989 Died from a fall; his senses all complete.
- 995 The old Cardinal, when asked by his friends what regimen he had observed, was wont to say, "By being old when I was young, I find myself young now I am old. I led a sober, studious, but not lazy or sedentary life; my diet was ever sparing, although delicate; my liquors the best wines of Zeres and La Mancha, of which I never exceeded a pint at a meal, except in cold weather, when I allowed myself a third more; I rode and walked every day, except in rainy weather, when I exercised for two hours. So far I took care for the body; and as to the mind, I endeavoured to preserve it in due temper by a scrupulous obedience to the Divine commands, and keeping (as the Apostle directs) a conscience void of offence to God and man." All his faculties were perfect up to his death, except hearing.
- 1000 All faculties perfect to the last.
- 1013 Worked at his trade until within a few days of his death.
- 1017 Worked in the mines until within three weeks of his death.

No.

- 1026 Her mother 116 ; her faculties all perfect to the last.
- 1030 Retained all his senses to the last.
- 1033 Until within three months of his death, got his living by selling fruit at a stall in the street.
- 1035 Enjoyed complete health until within a few days of death.
- 1036 In perfect health until within a few days of his death.
- 1045 Attended regularly at kirk and market until a few days before she died.
- 1058 He worked at his trade until 99, when he went into an asylum, and was employed to spin yarn.
- 1069 At the age of 99 she walked from Ronald Kirk, in Yorkshire, to London, a distance of 290 miles, in 5 days and 3 hours, carrying on her back a keg of gin and provisions for her support during the journey.
- 1070 Was married three times, at 40, 60, and 92 ; was so remarkably strong, that at 73 he removed a butt of beer from a cart without labour ; was always in good health, and kept all his senses, except hearing, until his death.
- 1083 Collected alms until a few days before his death.
- 1086 Gained his living by fishing until 105, and for the last two years by mending nets.
- 1087 A short time before her death walked a distance of 13 miles, and returned the next day ; had some new teeth at 90, and all her senses very acute.
- 1090 Wife 100 years old.
- 1091 Died from an accidental fall,—active, healthy, and his senses perfect.
- 1092 Her husband was sexton of the parish of Hurly, Derbyshire, for 70 years ; she practised as a midwife for more than 80 years. They were accustomed to boast that she had twice brought into the world, and he had twice buried, the whole parish.
- 1099 Retained all her faculties until the end.
- 1102 Never ill a day ; was out gathering herbs two hours before her death.
- 1105 His faculties failed about one year before his death.

No.

- 1111 Health always good.
- 1112 Retained all his senses until the last week of his life.
- 1116 Father 104, mother 96, uncle 110; two sisters living at her death whose united ages were 170.
- 1119 Had several teeth when he died, and retained his memory and other faculties to the last.
- 1123 Active in body and mind to the last.
- 1124 At 100 he travelled from Inverness to London, on foot, in five days, in order to solicit an increase of pension, having married a second wife, by whom he had a son.
- 1132 Faculties all perfect; gained her living by selling vegetables, which she fetched from market but a short time before her death.
- 1135 An idiot from her birth.
- 1141 In full possession of her senses to the last.
- 1145 A gamekeeper, and shot game flying in his 99th year.
- 1146 A noted pedestrian; a year before his death he undertook to walk ten miles in two hours, and did it.
- 1149 A sister 102 survived her.
- 1157 Never ill; retained all her faculties to the end.
- 1159 Retained all her faculties until the last; knitted a pair of ribbed stockings remarkably well a few days before her death.
- 1165 Used spectacles at 50, but recovered the power of sight so as to discard them, and was able to thread the smallest needle within a few days of her death.
- 1169 His health so uninterruptedly good, that until the last six months he acted as keeper of a turnpike-gate.
- 1170 Never confined to his bed for a day.
- 1172 Retained his senses to the last, and was wont to say "he never had a sore head nor sick heart."
- 1186 Never ill.
- 1190 Athletic and active to the last.
- 1193 Never had any severe illness; faculties perfect to the last; his wife, aged 99, survived him.

No.

- 1198 So active and strong that he could walk twenty miles a day, a few weeks before his death.
- 1203 A midwife; practised her profession until seven weeks before her death.
- 1204 Walked ten miles two days before his death.
- 1227 Retained her faculties to the last.
- 1232 A most remarkably hearty and cheerful old man; had a full set of teeth, all sound; his senses and faculties all perfect.
- 1234 Cut two new teeth at 102; had all her teeth except two when she died, was not wrinkled, and never ill until three days before her death.
- 1240 Had three sisters, 95, 98, and 101 years old.
- 1244 Retained all his faculties until within a few hours of his death.
- 1252 Retained all his faculties to the last.
- 1255 Never ill.
- 1256 Worked at his trade a week before he died.
- 1259 A week previous to her death she walked four miles, carrying a basket of apples.
- 1262 Retained all her faculties except hearing.
- 1264 Held the plough when 100, and could walk about until a few days before he died.
- 1273 Retained all his faculties except hearing.
- 1281 Never ill.
- 1284 Retained all her faculties.
- 1291 Worked as a labourer until within a few weeks of his death.
- 1298 Faculties all perfect; when 105 walked each day to Worcester Races, a distance of five miles.
- 1305 Worked as a day-labourer the last thirty years of his life.
Reported by his grandson.
- 1310 Active and laborious; often walked three miles to church.
- 1319 Retained his senses; only two days ill; his mother 112.
- 1329 Retained all his faculties to the last.
- 1333 *Vide* 'Monthly Magazine,' February, 1781.

No.

- 1334 *Vide* ‘General Evening Post,’ March, 1781.
- 1335 „ ‘Rees’s Cyclopædia.’
- 1336—1337 *Vide* ‘Morning Herald.’
- 1338 Retained all her faculties until the last year of her life, and employed much time in reading, which she did without spectacles. *Vide* ‘Morning Chronicle.’
- 1339 *Vide* newspaper.
- 1340 „ ‘Morning Chronicle.’
- 1341 Was confined to her bed 25 years; retained all her senses. *Vide* newspaper.
- 1342 Retained all her faculties. *Vide* ‘Morning Chronicle.’
- 1343 Never ill.
- 1344 *Vide* ‘Courier.’
- 1345 Left three sons and one daughter, all of whom attained nearly 100 years. *Vide* ‘Gentleman’s Magazine.’
- 1346—1347 *Vide* newspaper.
- 1348—1352 „ ‘Morning Chronicle.’
- 1353 *Vide* newspaper.
- 1354 Retained all his faculties; mother 105, brother 109; when 100 he performed a long journey on foot. *Vide* newspaper.
- 1357 *Vide* newspaper.
- 1358 Her hair was quite black, and no wrinkle could be seen in her face. *Vide* ‘Morning Herald.’
- 1359 Had the smallpox severely at 95; worked until within one month of his death; six months previously carried a load which many men would have found difficult to lift, for half a mile. *Vide* ‘Oracle.’
- 1361 *Vide* ‘Morning Chronicle.’
- 1362 „ newspaper.
- 1363 „ ‘Morning Chronicle.’
- 1364 „ ‘Observer.’
- 1365 Never ill; was found dead after dinner.
- 1367 *Vide* ‘Observer.’
- 1369 „ ‘Monthly Review,’ November, 1805.
- 1370 „ Lord Kaines’ History, vol. 2.

No.

- 1372 *Vide* newspaper.
- 1373—1374 *Vide* ‘Weekly Messenger.’
- 1375 Senses, except sight, all perfect; shortly before his death walked 37 miles in three days. *Vide* newspaper.
- 1376 *Ibid.*
- 1377 Worked as a laundress 75 years. *Ibid.*
- 1378 *Vide* ‘Morning Chronicle.’
- 1379 Followed his trade until a few days before his death.
- 1380 *Vide* ‘News.’
- 1381 All senses but sight perfect. *Ibid.*
- 1382—1384 *Vide* newspaper.
- 1385—1388 „ ‘News.’
- 1390—1391 *Ibid.*
- 1392 *Vide* French paper.
- 1393 „ ‘News.’
- 1394 „ ‘Edinburgh Advertiser.’
- 1395—1396 *Vide* newspaper.
- 1397 Never ill until one week before he died. *Ibid.*
- 1398 Faculties all perfect. *Ibid.*
- 1399 Retained all his faculties. *Ibid.*
- 1400 Retained all his faculties. *Ibid.*
- 1401 Was able to tune his harp a short time before his death. *Ibid.*
- 1402 *Ibid.*
- 1403 Retained his faculties. *Ibid.*
- 1404 Scarcely ever ill. *Ibid.*
- 1405 Retained her faculties. *Ibid.*
- 1406 Retained his faculties. *Ibid.*
- 1407 Retained her faculties. *Ibid.*
- 1408 *Vide* inscription in church.
- 1410 „ ‘Morning Chronicle.’
- 1411 Retained his faculties. *Vide* newspaper.
- 1412—1413 *Ibid.*
- 1414 Milked cows until two years before he died. *Ibid.*
- 1415 *Ibid.*
- 1416 Good health until a few days before death; drank largely of whisky. *Ibid.*

No.

- 1419 *Vide* ‘News.’
- 1420 „ ‘Morning Chronicle.’
- 1422 A wandering mendicant until his death. *Vide* newspaper.
- 1423 Never ill; retained all his faculties. *Ibid.*
- 1424 Retained his faculties until three weeks before his death; worked at his trade until 90. *Vide* ‘Morning Chronicle.’
- 1425 *Ibid.*
- 1426 Retained all her faculties; spun a few days before her death.
- 1427 Retained all his faculties; was accustomed to walk about the streets until a few days before he died. *Vide* ‘News.’
- 1428 *Vide* ‘Edinburgh Magazine.’
- 1429 „ Dutch paper.
- 1430 Begged in the streets until a few days before his death. *Vide* newspaper.
- 1431 *Vide* ‘Edinburgh Magazine.’
- 1433 „ newspaper.
- 1434 „ ‘Morning Chronicle.’
- 1436 *Ibid.*
- 1439 *Vide* ‘Scott’s Magazine.’
- 1441—1443 *Vide* ‘Morning Chronicle.’
- 1444 Faculties unimpaired. *Ibid.*
- 1445 *Ibid.*
- 1447 *Vide* ‘Morning Chronicle.’
- 1448 „ ‘Edinburgh Magazine.’
- 1451 Faculties unimpaired; never kept her bed until one month before she died. *Vide* ‘Morning Chronicle.’
- 1456—1457 *Ibid.*
- 1458 Faculties unimpaired. *Ibid.*
- 1459 *Vide* newspaper.
- 1467—1468 *Ibid.*
- 1469 Died in consequence of carrying too heavy a load, which induced inflammation in a rupture which he had had 83 years. *Ibid.*
- 1470—1471 *Ibid.*
- 1472 Retained her faculties, and could walk well.

No.

- 1473 Retained her faculties; both parents reached the same age. *Vide* 'Morning Chronicle.'
- 1474 *Vide* newspaper.
- 1475 , , 'News.'
- 1476 Retained her faculties.
- 1480 *Vide* newspaper.
- 1481 When 90 she walked to London. *Vide* inscription in church-yard, Ronald Kirk.
- 1484 Never ill a day; died from a fall down stairs. *Vide* 'Morning Chronicle.'
- 1485 Died of smallpox. *Vide* newspaper.
- 1486 Cut two teeth at 102, and had all perfect except two; faculties good. *Ibid.*
- 1487 *Ibid.*
- 1488 Worked at his trade until 100. *Ibid.*
- 1489 Rambled over the country pursuing his occupation until his death. *Ibid.*
- 1490—1498 *Ibid.*
- 1499 Brother 117. *Vide* 'Morning Chronicle.'
- 1500 *Ibid.*
- 1501 Husband, 95, survived her. *Ibid.*
- 1502—1505 *Vide* newspaper.
- 1506 Faculties unimpaired; could walk about till the last. *Vide* 'British Magazine.'
- 1507 *Vide* 'Times.'
- 1508—1510 *Vide* 'Morning Chronicle.'
- 1511 Faculties unimpaired. *Ibid.*
- 1512 *Ibid.*

TABLE II.

No.

- 3 *Vide* an ancient Latin inscription in the church of Camberwell, Surrey.
- 4 *Vide* 'Philosophical Transactions,' by Lowthorp, vol. 3, p. 306.
- 19 Could walk twelve miles a day until within three years of his death.
- 20 Married at 100; rode out hunting fifteen days before his death.
- 24 Died from an accident; cut some teeth two years previously.
- 28 Died from an accident; two years previously had cut several teeth, and her hair had changed its colour.
- 30 Faculties unimpaired.
- 31 Never was ill.
- 34 Always very healthy.
- 40 All his faculties unimpaired.
- 44 Danced with the morris-dancers a year before his death.
- 45 Worked at his trade until a year before his death.
- 46 Senses unimpaired; walked to bed the night before her death; two sons survived her, whose united ages were 170.
- 53 Worked at his trade until within two years of his death.
- 74 Health uniformly good.
- 75 Senses perfect; could work a short time before his death; his wife 106.
- 76 Faculties unimpaired.
- 82 Did duty in his church until a few days before his death.
- 90 Retained all his senses until three months before his death.
- 130 Wife 109 years old.
- 132 Retained his sight and hearing, and could walk without a stick to the last.
- 169 At the age^o of 102 she reaped wheat against a man a whole day.

No.

- 187 Was an agreeable and cheerful companion at 100, when he married his last wife.
- 198 Intellects perfect until two days before death.
- 204 Senses unimpaired; never was ill; had several new teeth at 100.
- 207 Senses unimpaired; teeth and hair perfect; was never ill until a few days before his death.
- 208 Never ill until a few days before death; lived on vegetables the last ten years of life.
- 219 Never ill; retained his senses; worked at his trade until 114.
- 222 The year before her death she walked fourteen miles to see her husband, and two years previously she reaped a ridge of corn as well as any young person; she appeared strong, healthy, and active, and had all her senses unimpaired, except a slight weakness of sight.
- 224 When about 80 he commenced business as a travelling chapman, and followed it until within eight weeks of his death.
- 227 Faculties unimpaired.
- 228 Always enjoyed good health; faculties unimpaired; had all his teeth, and but few hairs had turned gray; he had a fall, by which one of his legs was broken in three places, and death ensued.
- 233 Faculties unimpaired; was a great drinker, but not a drunkard.
- 235 Preserved her faculties to the last, as did also her brother, who died at 101.
- 236 Never was ill; never lost a tooth; his intellect clear until within one week of his death.
- 238 Worked in his garden until within a few days of his death.
- 239 Followed his trade a year before he died, and was then more active than most men at 60.
- 245 Senses unimpaired; worked as a day-labourer until within a few days of his death.
- 247 Never ill.

No.

- 250 Her brother died two years before her, aged 120.
- 253 Never was ill ; two years before his death rode to church alone ; died suddenly whilst eating supper.
- 262 Faculties unimpaired ; never was ill.
- 276 Senses unimpaired.
- 278 Senses unimpaired ; walked daily about is farm without assistance.
- 281 Retained all her faculties. *Vide* ‘Morning Chronicle.’
- 282 Never ill. *Vide* newspaper.
- 283 *Vide* ‘Morning Chronicle.’
- 284 Was in good health, and suffered only from failure of sight ; died in consequence of her clothes catching fire. *Vide* ‘Dundee Magazine.’
- 285 *Vide* ‘Sunday Observer,’ August, 1804.
- 286 Retained all his faculties, and was never ill until two days before his death. *Vide* ‘Philosophical Magazine.’
- 289 *Vide* newspaper.
- 290 Left four sons, the eldest 100. *Vide* ‘Oracle.’
- 291 Retained his faculties.
- 292 *Vide* ‘Star.’
- 293 Practised her profession for 97 years, until within two days of her death. *Ibid.*
- 294 *Vide* ‘News.’
- 295—297 *Vide* newspaper.
- 298 *Vide* ‘Stockholm Gazette.’
- 299 „ ‘Edinburgh Magazine.’
- 300 Retained all faculties. *Ibid.*
- 301 Her daughter, aged 80, nursed her during her last illness. *Vide* ‘Morning Chronicle.’
- 302—303 *Ibid.*
- 304 Was strong and active ; walked six miles the day before his death.
- 308 *Vide* newspaper.
- 309 Retained her faculties, and busied herself about the house a few days before her death. *Ibid.*
- 310 *Ibid.*

No.

- 311 Strong and active, and could walk eight miles a few days before he died. *Vide* newspaper.
- 312 Faculties unimpaired; continued his trade until 109; at 106 worked in the fields with his family; brought a law-suit to a close by the clear evidence he gave of occurrences 90 years previous.
- 317—318 *Vide* newspaper.
- 319 Never ill; cut fresh teeth at 100; senses unimpaired, and could spin to the last. *Ibid.*
- 320—322 *Ibid.*
- 323 *Vide* ‘Morning Chronicle.’
- 324 Walked well to the day of his death. *Vide* ‘Times.’
- 327 Faculties unimpaired; spun until the day before her death. *Ibid.*, Jan. 11th, 1819.
- 328 Retained his faculties, and attended to business a few days before he died.
- 329 *Vide* ‘Morning Chronicle,’ May 17th, 1821.—
- 330 Senses unimpaired; so active and strong that he could run a race within a year of his death. *Vide* ‘Carew’s Survey of Cornwall.’
- 331 *Vide* ‘Rees’s Cyclopædia.’

TABLE III.

- 1 *Vide* ‘Rees’s Cyclopædia.’
- 2 „ inscription in portico of All Saints’ Church, Northampton.
- 3 Died in the workhouse in Rosemary Lane, London.
- 4 *Vide* inscription in the Church at Shifnall, Shropshire.
- 5 Her father 106.
- 8 Teeth all sound; never ill; always worked hard.
- 15 The great-grandson of Thomas Parr; his father was 109, his grandfather 113.
- 21 Grandson of Thomas Parr.

No.

- 24 Grandson of Thomas Parr.
- 25 An ardent lover of fox-hunting; followed the hounds until 80, until 100 attended the unkenneling in a chair; drank freely until within ten years of his death.
- 32 Walked two miles to a christening shortly before his death.
- 38 Could walk well to the last.
- 39 Retained all his senses.
- 48 Left a son and daughter, each above 100.
- 50 Intellects quite perfect.
- 54 His sight failed after his 117th year; his health began to decline only a few days before his death.
- 55 Retained her senses, and could work at spinning until six months before her death.
- 57 Retained all his faculties; a brother 102. *Vide 'Daily Advertiser,' March, 1774.*
- 61 Retained all her senses until near her death.
- 62 Married her third husband at 92; was hearty and strong at 122. *Vide inscription in Shiffnal Church-yard.*
- 66 *Vide inscription on her tomb in church-yard, Dalgeith.*
- 68 Senses unimpaired.
- 69 Had excellent health always, until the last two years.
- 73 August 20th, 1786, he sat down at dinner in company with his son, 98, and his grandson, 70 years old.
- 74 Senses unimpaired; walked about a day or two before his death.
- 79 When 127 years old was sent as a Deputy to the National Assembly of France.
- 83 Senses unimpaired, and memory remarkably retentive, until two years before his death.
- 86 Never ill.
- 87 Acted as schoolmaster more than 80 years. *Vide newspaper.*
- 88 Retained his faculties. *Ibid.*
- 89 Always in health until a few days before death. *Vide 'Belfast News-Letter,' March, 1808.*
- 90 Retained all her senses but sight until the last two months.

TABLE IV.

295

No.

- 91 *Vide* newspaper.
 92 „ ‘Morning Chronicle.’
 93 „ ‘Bee,’ vol. 2.
 94 „ French newspaper.
 95 „ ‘Times,’ 1818.
 96 *Ibid.*, August 14th, 1818.
 97 *Vide* ‘Fuller’s Worthies.’
 98 „ ‘Rees’s Cyclopædia.’
 99 „ Carew’s ‘Survey of Cornwall.’
-

TABLE IV.

- 1 Buried at Stoke, near Canterbury.
 2 Retained his faculties; never was sick.
 3 The son, who inherited his estate, was born when he was 100.
 4 Never ill until a few days before death. *Vide* Lynch’s ‘Guide to Health.’
 5 Followed his trade until six weeks before he died, and carried a log of wood to his workshop.
 10 Memory strong; faculties unimpaired.
 11 Husband 128.
 12 Could walk well, and mount his horse nearly until his death.
 13 Daughter 105.
 14 Senses unimpaired until 14 days before she died; three daughters survived her, respectively aged 111, 110, and 109 years.
 20 *Vide* Rees’s ‘Cyclopædia.’
 22 Married five times; senses unimpaired to the last; Christmas Day, 1789, walked nine miles to dine with a grandchild.
 25 *Vide* ‘Morning Post,’ Feb. 1776.
 26 „ ‘Daily Advertiser,’ June, 1776.
 27 „ Lynch’s ‘Guide to Health.’

No.

- 28 *Vide* ‘General Gazetteer.’
- 29 Followed his occupation until within a few weeks of his death. *Vide* ‘News,’ Feb. 16th, 1806.
- 30 *Vide* ‘News,’ 1807.
- 31 Had a new set of teeth 20 years before he died, which remained sound; retained all his senses, except smell; was only once ill; walked four miles a few days before his death. *Vide* newspaper.
- 32 *Ibid.*
- 33 *Vide* ‘Morning Chronicle.’
- 34 „ Fuller’s ‘Worthies.’
- 35 *Ibid.*
- 36 *Vide* Buchanan’s ‘History of Scotland.’
- 37 „ ‘General Gazetteer,’ Oct. 1782.

TABLE V.

- 2 *Vide* Sir Walter Raleigh’s ‘History of the World,’ p. 166.
- 3 „ Fuller’s ‘Worthies,’ p. 140.
- 4 „ ‘Annual Register’ and Rees’s ‘Cyclopædia.’
- 5 Senses unimpaired. *Vide* Rees’s ‘Cyclopædia.’
- 6 *Vide* Hufeland’s ‘Art of Prolonging Life’ (Keil’s ‘Magazin’).
- 8 *Vide* tomb in Churchyard, Ware.
- 10 Senses unimpaired; hunted and killed a deer a few days before his death.
- 11 *Vide* Rees’s ‘Cyclopædia.’

TABLE VI.

- 1 *Vide* ‘Philosophical Transactions,’ No. 44.
- 2 „ Church register at Leighton, near Chester, and tombstone at same place; the age is cut in letters, and verified by the signatures of the Vicar and Churchwardens.

TABLE VII.

297

No.

- 3 *Vide* 'Philosophical Transactions,' No. 221.
- 5-6 Were married 148 years; had two sons and two daughters, the youngest 116 years old.
- 9 *Vide* newspaper.
- 10 " Church register, Cheshire.
- 11 " newspaper.
- 12 *Ibid.*
- 13 *Vide* tombstone, Bridling Church, near Bristol.
- 14 " parish register, Glamorganshire.
- 16 " parish register of Eveoreach, Somersetshire: "Buried December 20, 1588, Jane Britten, a maiden, as she affirmeth, at the age of 200."
- 17 *Vide* Rees's 'Cyclopædia.'

TABLE VII.

- 1 In the last few years cut five teeth, three of which remain; has had twelve children; her eldest son, aged 82, is strong and hale. *Vide* 'Morning Chronicle,' Nov. 24th, 1809.

2 *Ibid.*3 *Ibid.*, Oct. 9th, 1810.4 In good health. *Ibid.*5 *Vide* 'Bee,' Nov. 2, 1803.

6 " 'Morning Chronicle,' Aug. 6th, 1805.

7 " newspaper.

8 In good health, and retaining all her faculties; living in a cellar, in Kent Street, Liverpool, where she has resided 50 years.

9 *Vide* 'Star,' Oct. 22, 1804.10-11 Married at Dnblin, June 1772, P. Storms, 109, to Mrs. Bury, 102. *Vide* newspaper.12 In good health; was a slave 70 years. *Vide* New York paper.

No.

- 13 Sight and hearing particularly good; reaped in the fields every year.
- 16 Retains his faculties.
- 17 Retains her faculties; her father lived to be 107, her sister 104, and several relatives to 90 and upwards.
Vide newspaper.
- 18-19-20-21 All children of Edw. Legge, who had nine other children, many of whom attained to a very old age.
Vide newspaper, also 'Notes and Queries,' March, 1852.
- 22 *Vide newspaper.*
- 23 *Ibid.*
- 24 An itinerant bookseller; pursues his trade, and can make a circuit of 20 miles in a day. *Ibid.*
- 25 Has left Scotland to sail for Jamaica, to visit his sons.
Vide 'Sunday Review,' Aug. 4th, 1805.
- 26 Joined other women in shearing oats, and performed her work well. *Vide 'News,' Sept. 8th, 1805.*
- 27 A gardener; attends market daily, and walks as well as most men in their prime. *Ibid., Oct. 1806.*
- 28 Lives entirely by himself; cultivates his garden; milks his cows; makes his butter, which he carries on foot to market; his cottage is noted for its extreme cleanliness.
Vide newspaper, 1806.
- 29 In good health; faculties unimpaired. *Vide 'News,' 1807.*
- 30 In St. George's Workhouse; has in the last three months cut four teeth.
- 33 Carpenter; works at his trade, and can ascend the roof of a house as well as ever. *Vide 'Oracle,' July, 1801.*
- 34 Faculties unimpaired; walked two miles to dine with a friend.
- 35 Carries home his work, and can walk 14 miles a day.
- 36 Retains her faculties, and will walk a mile or two to take tea.
- 37 *Vide 'Morning Chronicle,' Sept. 21st, 1802.*
- 38 At the age of 86 fought at the battle of Pultowa under Gustavus Adolphus; married at 93; he has 186 descendants—two grandchildren above 100; now enjoys

No.

- good health. *Vide* ‘Philosophical Magazine,’ No. 66, Nov. 1803.
- 39 Retains her faculties. *Vide* ‘Dundee Magazine.’
- 40 All his senses, except sight, unimpaired; is strong, robust, and cheerful; entertained between 30 and 40 friends on his 100th birthday; his father was 95, mother 100, three sisters 80 to 85 each, and one 93. *Vide* ‘Morning Post,’ Nov. 2d, 1805.
- 41 Works at his trade. *Vide* newspaper.
- 42 Strong and active; can dance at country meetings. *Vide* Norwich paper, July 3d, 1816.
- 43 Catholic priest; returned thanks for having attained the age of 110; walked to and from the Church, and chaunted the service in a full manly voice. *Vide* ‘Morning Chronicle,’ Jan. 20th, 1817.
- 44 *Vide* ‘Times,’ Nov. 6th, 1819.
- 45 In good health; hears and sees well. *Vide* ‘Edinburgh Magazine,’ Feb. 1821.
- 46–47 Living in a district of Peru, containing not more than 70,000 inhabitants. *Vide* ‘Edinburgh Review,’ No. XVIII.
- 48 Four sisters died at the age of 75, 87, 95, and 77, and one is now living, aged 88.
- 49 *Vide* ‘Law Chronicle,’ Oct. 5th, 1780.
- 50 “, Durham’s ‘Physico-Theology,’ page 173.
- 50–51 “, Rees’s ‘Cyclopædia.’
- 52 “, ‘Daily Advertiser,’ Nov. 18th, 1777.
- 53 It is not known when he died; but Mr. Stockdale tell us that it is reported that in the reign of Charles II, when the plague visited Lisbury, the infected were removed to a neighbouring moor, where the old pastor assiduously ministered to their spiritual and physical wants. He writes of himself to a friend Oct. 9th, 1657, “It is now the third year since I had two new teeth. My sight, decayed many years ago, is now become clearer; hair adorns my heretofore bald skull. I was never of a fat,

No.

but a slender lean habit of body. My diet has ever been moderate, nor was I ever accustomed to feasting and tippling. *Vide 'Notes and Queries,' May, 1853.*

- 54 Was in early life a servant in the Royal Family of France ; received from them a small pension, which she enjoyed nearly 100 years, and until 10 years since travelled once every year over the mountains on foot to receive it ; she was slightly deaf, but all her other senses unimpaired when seen in 1833. *Vide 'Notes and Queries,' April, 1852.*
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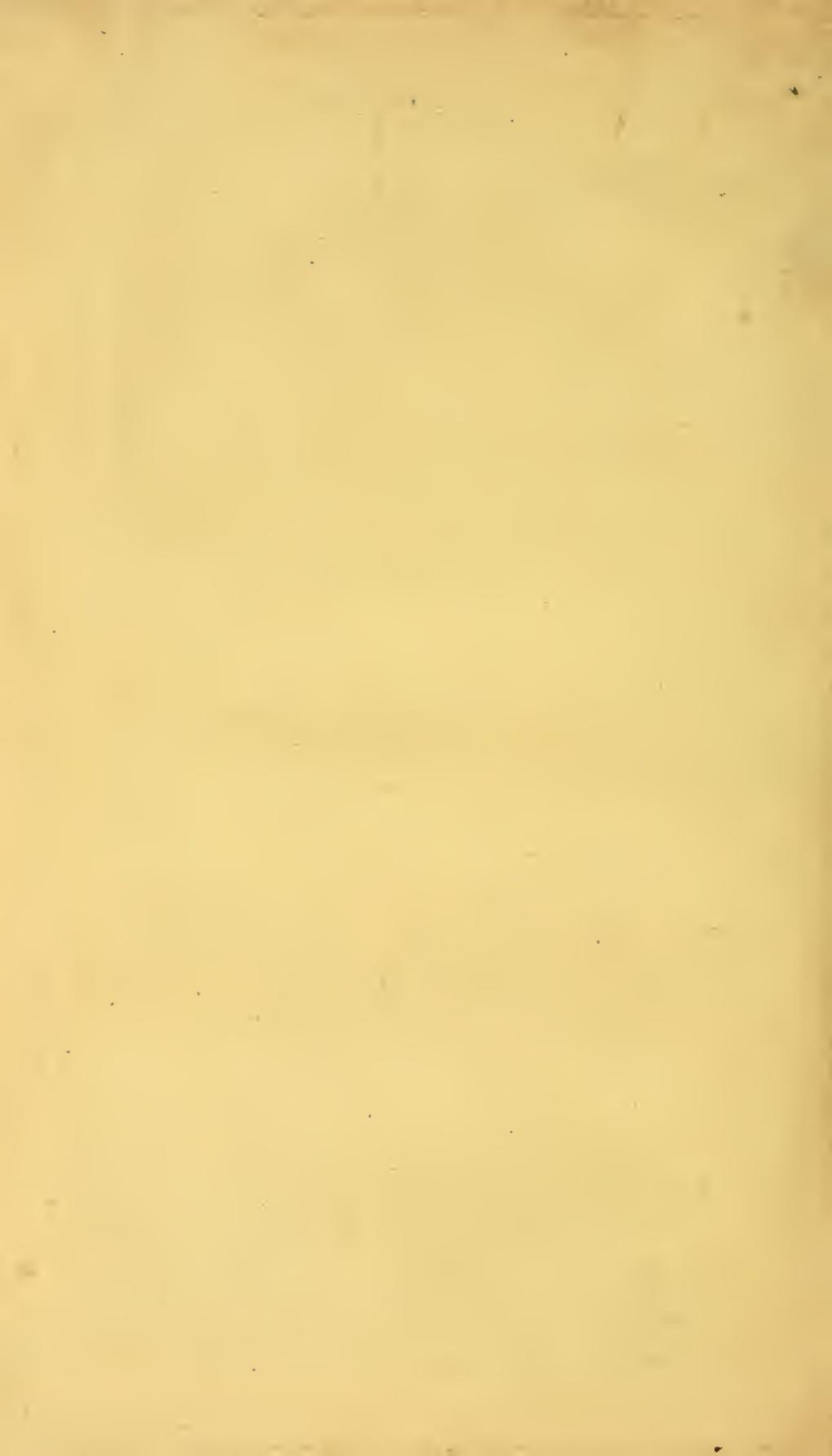
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